

# **BRADLEY FIGHTING VEHICLE COMMANDER (DEFENSE)**

SUBCOURSE NO. IN0479

01 February 1990

US Army Infantry School  
Fort Benning, Georgia

Five Credit Hours

## **GENERAL**

The purpose of this subcourse is to identify the defensive operations of the mechanized infantry platoon equipped with the M2 Bradley fighting vehicle. The student will learn the defensive tactics and techniques employed by the Bradley platoon while preparing for and conducting defensive operations.

**TASK:** The subcourse is designed to present the necessary information to prepare and conduct defensive operation with a BFV platoon.

**Conditions:** Given the subcourse material, a combat (training) scenario, and extracts, as applicable, the student will complete the examination at the end of this subcourse.

**Standards:** The student will successfully answer 75 percent of the questions on a multiple-choice based examination for subcourse IN0479 by planning a defense by an M2 BFV, conducting a defense by an M2 BFV, supervising preparation of an M2 BFV Position for a defense, planning for support for a defense, employing an M2 Bradley Platoon on a Battle Position, conducting a defense by an M2 Bradley Platoon during MOUT, organizing a platoon for night defense, conducting a disengagement by a platoon while under enemy pressure, supervise employment of smoke, planning a withdrawal not under enemy pressure, and employing the BFV in an Air Defense role.

This objective supports soldier's manual tasks:

071-430-0015	Plan a defense by an M2 BFV.
011-430-0017	Conduct a Defense by an M2 BFV Platoon.
071-430-0012	Supervise Preparation of an M2 BFV Position for a Defense.
071-284-3003	Plan for Support for a defense.
071-326-5908	Employ an M2 Bradley Platoon on a Battle Position.
<a href="#">071-440-0019</a>	Conduct a Defense by an M2 Bradley Platoon During MOUT.
<a href="#">071-326-5515</a>	Organize a Platoon for Night Defense.
<a href="#">071-326-5832</a>	Conduct a Disengagement by a Platoon While Under Enemy Pressure.
071-450-0037	Supervise Employment of Smoke.
071-326-5833	Plan a Withdrawal Not Under Enemy Pressure.
NSMT	Employ the BFV in an Air Defense Role.

## INTRODUCTION

In this subcourse, the focus will be on how the Bradley is used in the defense. To understand this, you must first have an overall view of the Bradley, and be aware that it is not merely a new type of armored personnel carrier. It is a fighting vehicle in its own right. With its use, many of the abilities of infantry are increased. Mobility and speed are greater. A great deal of firepower is added. Armor gives more protection for troops. Yet, the Bradley platoon keeps the role of fighting on foot.

In any tactical use of the Bradley, there is one key point to weigh. Each BFV platoon is really two elements. The BFV crew is one element. They are trained to fight the Bradley, using its weapons systems. The second element is the rifle team. On dismount, the rifle team becomes a separate force. This key point changes many things in control and command.

At the moment of dismount, there are two forces. They cannot be controlled by one man. Each needs leaders. The Bradley must dismount leaders with the rifle team. From this, we can see that Bradley leaders must be versatile. When the needs of battle demand it, any Bradley leader must be able to do the job of any other. This gives the depth of leadership needed to fulfill missions.

Each Bradley leader should know defensive operations. The purpose of these is, to repel an enemy and destroy the attacker. Defensive operations are also used to hold key terrain, gain time, or wear down the threat. It completes tasks assigned by the commander of that larger force.

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## LESSON 1

IDENTIFY THE FIRE PLANNING MEASURES, PRIORITIES OF TASKS, AND METHODS OF EMPLOYMENT OF A BRADLEY PLATOON IN THE DEFENSE, MOUNTED OR DISMOUNTED.

### TASK:

Identify the fire planning measures, priorities of task, and methods of employment of a Bradley platoon in the defense, mounted or dismounted.

### CONDITIONS:

Given the subcourse material for this lesson, a combat (training) scenario and extracts, as applicable, the student will complete the practical exercise at the end of this lesson.

### STANDARDS:

The student will demonstrate his comprehension and knowledge by identifying the procedures to conduct defensive operations.

### REFERENCES: [FM 7-7J](#)

In this lesson, the tactics and techniques used by the Bradley platoon in the defense will be discussed. You will look at task priorities and fire planning. This will include fire distribution and control procedures.

The defense may involve fast and frequent movements. These are made between battle positions and during countermeasures.

The platoon and squad must be able to respond to changes in mission on short notice. They must be able to fight immediately from a new battle position. To do this, they must learn to exploit the mobility and firepower of the BFV. They must develop and practice SOPs. All battle drills needed must be mastered.

### Learning Event 1: IDENTIFY TASK PRIORITIES USED IN PREPARING THE BRADLEY PLATOON FOR DEFENSIVE OPERATIONS

This learning event will teach the task priorities used to prepare the Bradley platoon for the defense. First, identify the tasks and look at an operation order.

### DEFENSIVE TASKS

The platoons defend to hold terrain and to destroy the enemy. Their tasks include--

- Destroying enemy BMPs, BTRs, and other lightly armored vehicles. They use the 25-mm gun, Dragons, light antitank weapons (LAWs), and grenade launchers to do this.
- Destroying enemy tanks with the BFVs' TOW, and with Dragons and LAWs.
- Suppressing enemy antitank fires. This is done with the 25-mm gun, grenade launchers, 7.62-mm coax machine guns, squad automatic weapons (SAWs), and rifles.
- Repelling dismounted attacks. This is done with the BFV and dismounted infantry.

- Locating the threat and providing security. To do this, the dismounted element mans observation posts and conducts patrols and ambushes.
- Building obstacles to slow, stop, or canalize the threat. The platoons also provide security for obstacles; that is, mines and log craters.
- Conducting counterattacks. These may be platoon size or as part of a larger force. They are conducted to regain a part of a position that has been overrun.

## PLATOON LEADER'S ORDER

The platoon leader gets the company operation order. He then begins his troop-leading procedures. These start with an analysis. He must consider the mission, enemy, terrain, troops, and time.

### Immediate Action

At time, the tactical situation demands that the platoon leader acts immediately. He must then issue simple, fragmentary orders. These will relay heavily on SOPs. Drills are used when occupying a battle position. They reduce time and confusion. No matter what time is available, the platoon leader should complete as many of the troop-leading procedures as he can.

### Completing the Order

The platoon leader completes his analysis. He makes his reconnaissance and develops his plan. He then completes his order. The order should be issued orally. The standard five-paragraph format should be used. When possible, he refers to SOPs in the order. This helps to shorten the order. When he can, the platoon leader gives his order from a point which overlooks (or is on) the platoon's defensive position. The order explains what is to be done, how, when, and by whom. The platoon leader asks the squad leaders to recite back their mission. This is to ensure his orders are simple, clear, and understood.

## PRIORITY OF TASKS

The platoon must use all the time it has to the fullest. The leader sets up task priorities to help do this. As a rule, these are found in the SOP. They can be modified as needed. In most situations, the tasks are--

Establish Security. Observation posts are set up. Patrols are used to search for stay-behind forces, sensors, mines, or booby traps. The M8 alarm is set up. One-third of troops are on security at all times.

Position Key Weapons. Set up location, sectors of fire, PDF, and FPF. This is done for BFVs, Dragons, and M60's or SAWs.

Clear Fields of Fire. Range cards and sector sketches are made at this time.

Prepare Fighting Positions. The primary positions are made ready for the defense.

Emplace Mines and Obstacles. A hasty minefield/obstacle system is set up.

Set Up Communications. The local system for communications is set up (wire, trenches), and any observation posts (OPs).

Emplace Warning Devices. These include the Platoon Early Warning System (PEWS), night vision equipment, and other devices. This task will have a higher priority in limited visibility.

Improve Fighting Positions. Overhead cover is used, and aiming stakes are driven. Camouflage is used as fully as possible. Land lines will be buried. Any fresh earth will be hidden or disposed of.

Other Positions. Positions to supplement and be alternates to the primary are set up.

Supplies. A stockpile of supplies should be set up. These should include ammunition, water, and food. Maintenance should be conducted.

#### Task Timing

Some of these tasks should be done at the same time. The platoon and squad leaders must supervise these functions closely. This ensures that time is not lost on tasks of minor priority. The first 30 minutes of occupying the position are crucial. Security is set up, positions are manned, and work is begun. The platoon leader must conduct a hasty reconnaissance. He must ensure that the location of his position is correct in order that squad sectors and key weapons will not have to be relocated.

#### Coordination

The platoon leader should coordinate with both flank units and the commander of the larger force. Squad leaders coordinate on their flanks as well. This must be done early. Again, the purpose is to ensure that changes will not have to be made. Changes that must be made after the work is well under way will waste time.

#### Supervision

Supervision of the work must be constant. It is vital to verify squad sectors, key weapons positions, and fields of fire. It may become obvious to a platoon or squad leader that a change must be made. A sector may need to be adjusted, or a position may have to be shifted. The decision should be made quickly. Soldiers are then moved to where they are needed most.

#### Other Plans

Rest, sleep, and eating plans should be made. These ensure that security and work can go on. They help to avoid having all men exhausted when the attack comes.

#### CONCLUSION

The priorities used by the Bradley platoon to prepare for the defense have been identified. They are planned to make the best use of all the time available. Their success depends on the leaders. They are the only means to ensure that the platoon is prepared.

#### Learning Event 2: IDENTIFY FIRE PLANNING CONSIDERATIONS USED IN PREPARING THE BRADLEY PLATOON FOR DEFENSIVE OPERATIONS

Your task priorities have been set up. You are now ready to do fire planning. In this learning event, look at fire planning considerations for the defense. Plan for indirect fire and FPF. Sector sketches and range cards will be used to aid in the planning. Obstacle and remount plans will be looked at.

## INDIRECT FIRE PLANNING

Most indirect fires are planned by the company commander. The FSO aids him in this. They use input from the platoons in their plans. A copy of the target list is given to the platoon leader. The platoon leader and his forward observer (FO) check the target list. They ensure that fire is planned on all threat avenues of approach. They also see that fire is planned for known or likely threat positions in the platoon sector of fire. If more targets are needed, the FO requests them through the FSO. The FO will stay with the dismount force. If he is mounted, he is not able to call or adjust fires.

### Selecting Targets

At platoon level, fires are planned to the front, on top, and to the rear of platoon positions. In each of these areas, fires are planned on likely avenues of approach. They are also planned on prominent terrain features. Fires may be adjusted from these. Fires are also planned on dead space that the platoon weapons cannot cover.

The platoon leader and his FO work as a team to plan fires. As a rule, this is done after the platoon leader decides where his plan needs to be strengthened. Rifle team sketches and BFV range cards are compiled to do this. The platoon leader selects a few critical targets. These are targets that will be easy to identify in the battle.

### Naming and Confirming Targets

After the targets have been chosen, the coordinates are named. These will be eight digit, when possible. This data is passed to the company team FSO. He compiles all the platoon fire plans for the company commander. In time, the confirmed target list is returned to the platoon. The FO quickly confirms by plotting on the map. The company commander may have added or deleted some targets. Once the confirmed targets have been plotted on the map, they are matches to the terrain. They are then passed among key personnel (PSG, RATELO).

### Number of Targets

There is a guide for how many targets the platoon leader should request. It is based on his ability to call for them during the battle. He should try to memorize all target numbers in his sector. This allows him to call for them quickly. He does not have to depend on a map or reference card. These aids may not be of much use in limited visibility. As a rule, a few targets will be enough in a platoon sector. This is even more true if they have to adjust fire from certain terrain features.

### Final Protective Fire

The company commander may assign the FPF. It may be mortar or artillery fire. The FPF is a barrier of fire, arranged in advance. The platoon leader must plan for its location with his FO and FSO. It should cover the most threatening dismounted approach.

The FPF is planned close to the platoon position, but not close enough to put friendly troops in danger. The FO will advise the platoon leader on how close to the troops it can be fired with no danger. This varies with the type of weapon and ammunition fired. The impact area of some typical FPFs are shown below.

<u>Weapon</u>	<u>Unit</u>	<u>Width of Impact</u>
107-mm mortar	Platoon (6 mortars)	200 meters
105-mm howitzer	Battery (6 howitzers)	300 meters
155-mm howitzer	Battery (8 howitzers)	400 meters

When assigned an FPF, the platoon leader will have the authority to call for it. This is unless the company commander has retained that authority. The FPF is fired as a last resort to stop an enemy assault. It is fired on order, continuously, until ordered stopped. All other platoon weapons fire while the FPF is being fired.

## OBSTACLE PLANNING

The platoon has little resource to emplace obstacles. But there are a number of ways it can enhance its sector. Mines can be carried on the BFV and used to emplace a hasty minefield. Tactical wire can also be carried. It is used for protection. It may also be used to deceive or confuse the enemy about exact positions. Trip flares and Claymores can be set up. Field-expedient tangle-foot obstacles can be put in place. Trees may be cut, using pioneer tools. These are used to build abatis and road blocks.

### Engineer Support

The platoon leader will have engineer support at times. He should still put in any obstacles that he can with his own assets. Priority can then be given to those projects that need outside help. In many cases, the engineer assets in the platoon sector are there to carry out missions from the larger force. In these cases, the platoon leader should verify the obstacles. They should fit into his platoon defense plan. If they do not, he must coordinate with the engineers, or with the company team commander.

Once obstacles have been emplaced, the platoon obstacle plan should be reviewed. Adjustments to platoon-made obstacles may need to be made. The obstacles must also be covered by observation and fire. If not, they are easy to breach or bypass. This is even more true in limited visibility.

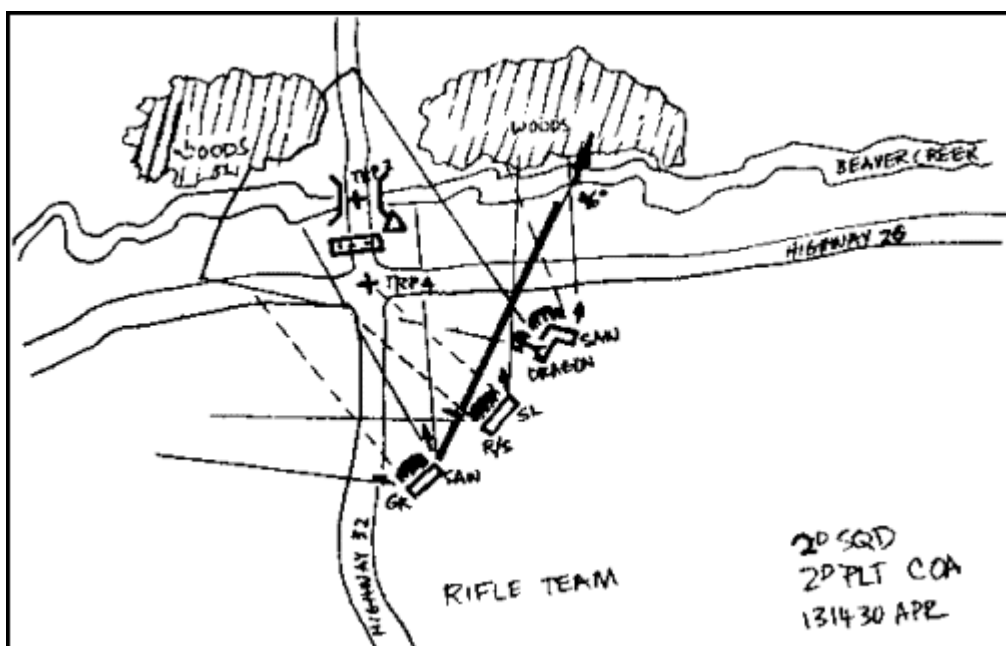
## DEFENSIVE SECTOR SKETCH

The leaders of the fighting vehicle crews make up BFV range cards (DA Form 5517-R). Squad leaders draw up sector sketches. Each antiarmor specialist and automatic rifleman makes up a range card. The range card is covered in the next learning event. The sketches and range cards serve as memory aids for the platoon. They also help the platoon leader prepare his platoon fire plan.

### Rifle Team Sector Sketch

The rifle team sector sketch is a rough drawing. It is shown in [Figure 1](#).





**FIGURE 1. RIFLE TEAM SECTOR SKETCH.**

The squad sector sketch is made as close to scale as possible. The sketch shows--

- Main terrain features in the sector and range to each.
- Each primary position.
- Engagement areas or primary and secondary sectors of fire for each position.
- SAW or M60 FPLs and PDFs.
- Type of weapon in each position.
- OP and leader positions.
- Target reference points in the sector.
- Dead space.
- Obstacles.

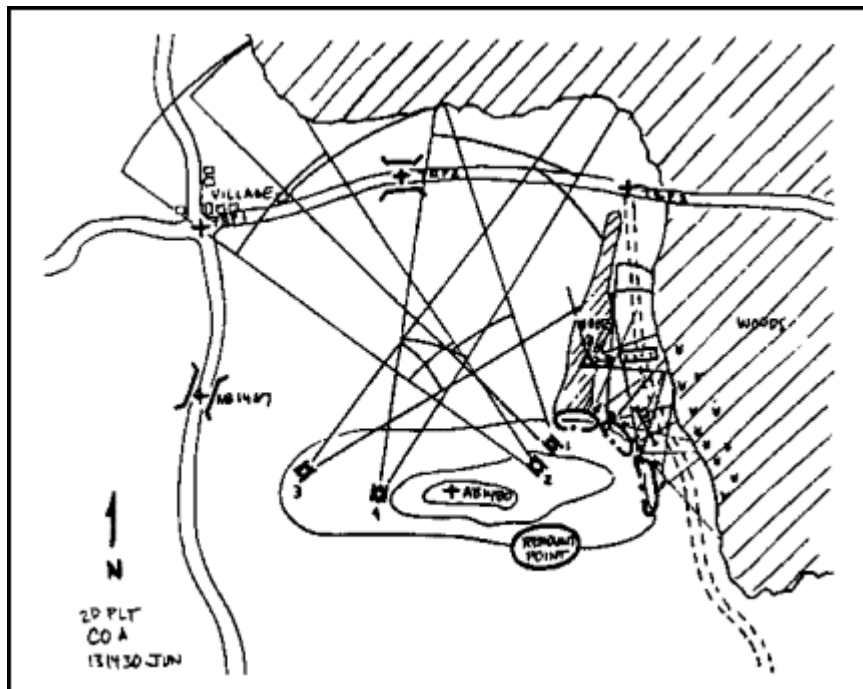
The sketch should be based on direct observation of the sector. Each weapon's range card is used in making it. Two copies of the sketch should be made. One copy goes to the platoon leader; the other copy stays at the position.

**NOTE** The parts of the squad sector sketch described are the minimum. At least this many items are needed if the sketch is to have meaning. The platoon SOP may require more detail. The M60 will be kept in each squad until the M249 SAW is issued. FPLs or PDFs do apply to M60's or SAWs, but only when the weapon is used with tripod and traversing and elevating mechanisms.

#### Platoon Sector Sketch

The squad leader or assistant squad leader prepares the team sector sketches and submits them to the platoon leader. Bradley commanders prepare range cards for their individual vehicles and submit them to the platoon leader. The platoon leader combines the sketches and range card to make a platoon sector sketch. A platoon defensive sector sketch is a line drawing as closely to scale as possible and includes a target list for direct and indirect fires. (See [Figure 2](#)). The sketch includes--

- Platoon or element sector or engagement area.
- BFV and team positions.
- BFV positions with primary sectors of fire or engagement areas.
- BFV remount point.
- Dragon and SAW positions with primary sectors of fire for each.
- SAW or M60 FPLs or PDFs.
- Maximum engagement ranges of tube-launched, optically tracked, wire-guided (TOWs), 25-mm gun, and coax machine guns.
- OPs.
- TRPs and target numbers.
- Mines and other obstacles.
- Indirect fire target locations.
- The indirect fire FPF location, if allocated.



**FIGURE 2. PLATOON SECTOR SKETCH.**

There are many demands on the platoon leader's time in the early part of the defense. For this reason, he may use his FO to make the platoon sector sketch. The FO will then use the range cards and squad sketches to make a tentative platoon sector sketch. This saves the platoon leader time. It also lets the FO start his fire planning right away. He can then decide which targets to recommend to the platoon leader.

At least two copies of the platoon sector sketch are made. One stays with the platoon leader. The other goes to the commander of the larger force. This must be passed on as quickly as possible. It is needed for use in the company fire planning. If there is time, more copies are made. These are given to each subordinate team or squad.

NOTE The parts of the platoon sector sketch given are the minimum needed. The  
: company SOP may require more detail.

## COORDINATION BETWEEN ADJACENT PLATOONS, SQUADS, AND TEAMS

Platoon leaders must coordinate with adjacent platoons. Squad leaders coordinate with adjacent teams. This gives mutual support between all elements. The platoon leader checks to see that this has taken place. As a rule, coordination is initiated from left to right. Gaps between positions are covered by fire, as a minimum. Coordinating points are set up. These ensure that groups will meet at a named point on the ground to tie in their flanks.

### Information Exchanged

Coordinating units exchange information. In many cases, a sector sketch can be exchanged. This will include most of the information needed. That information is--

- Locations of primary, alternate, and supplementary positions.
- Sectors of fire for BFVs, SAWs, and Dragons.
- Location of dead space between units and how it is to be covered.
- Location of OPs.
- Location and types of obstacles and how to cover them.
- Patrols, to include size, type, time of departure and return, and routes.

In some cases, the BFVs are placed to support both the dismount force and the flank platoon. At times, this may even be a compromise position. It must be occupied to tie in the flank. The platoon leader must keep in mind that he defends a part of a company team. He must use care in tying in flanks.

## PLANNING FOR REMOUNT

The platoon will dismount the rifle teams in the defense. The remount must be planned in detail. This is even more true when further mounted movement is part of the defense plan. It is also crucial when the BFV and dismount forces will be separated for the fight. The platoon leader must be able to plan and execute a speedy remount. The BFV has the advantage of speed. This is lost when it must wait for linkup and remount. Planning for the platoon remount should include--

- Remount location.
- Reconnaissance of route to the remount point by both the BFV and dismount forces.
- Marking of the route to the remount point.
- Signals to start the remount.
- Contingencies for limited visibility and loss of communications or leaders.

## CONCLUSION

You have seen the fire planning considerations used by the Bradley platoon in the defense. The platoon leader must know and be able to use these. The fire planning must be done well if the defense is to succeed.

### Learning Event 3: IDENTIFY FIRE DISTRIBUTION AND CONTROL PROCEDURES USED BY THE BRADLEY PLATOON FOR CONDUCTING DEFENSIVE OPERATIONS

The Bradley platoon lives by its firepower. This asset must be used to the fullest extent. Fast and effective fire means survival in battle. Even when the platoon fights outnumbered, it must distribute its fires over the threat force. Every shot must count. To do this, fires must be controlled. Platoons must develop and use standard procedures to distribute and control fire. Response in the first few seconds of battle must be instant. The first shots fired will be crucial ones. It must be your platoon that fires them, and not the threat. With the upper hand of having fired the first shots, you are ahead. Fire can then be redistributed if need be.

At times, the platoon leader will be able to direct the fires of the entire platoon. This will happen mainly while in the defense.

Visual control measures can be used to control fire. They can start and stop engagements and shift fire. They can also signal actions arranged in advance. Often, though, the radio must be used. The speed of mechanized warfare demands it. Alerts and commands must be clear, accurate, and brief.

#### PRINCIPLES OF FIRE CONTROL AND DISTRIBUTION

There are general principles. They apply to all fires of the Bradley platoon. The platoon leader must recall and use them when setting up SOPs.

##### Avoid Target Overkill

At times, the platoon will fight outnumbered. As a rule, they cannot then afford to engage a single target with more than one weapon. Bradley commanders must strive for one-on-one engagements. TOW should make one-shot kills. The 25-mm gun should be used for single-round ranging shots and short-burst kills. Avoid engaging disabled vehicles. These targets should be left for tanks. Tanks and other weapon systems have a larger ammunition load and more destructive power. When other, more dangerous, targets are destroyed, disabled vehicles may be engaged.

##### Use Each Weapon in Its Best Role

Each BFV weapon has a role to which it is best suited. In this role, it best compliments the other weapons. The platoon should use the weapons in their best roles.

The 25-mm Gun. The 25-mm gun is best used to kill lightly armored or thin-skinned vehicles. It is also used to suppress antitank guided missiles (ATGMs) at medium to long range. Each BFV carries 900 rounds of 25-mm ammunition. As a rule, this include 300 rounds of armor-piercing discarding sabot (APDS) and 600 rounds of high-explosive incendiary-tracer (HEI-T).

The TOW. The TOW is best used against armored targets, mainly tanks. These cannot be killed with the 25-mm gun. Each BFV can carry up to seven TOW missiles. Two are in the launcher. The other five are stowed inside the BFV. Note that TOW and Dragon missiles use the same storage space. If two Dragons are stowed, there is room for only three TOWs inside the BFV.

The 7.62-mm Coax Machine Gun. This is best used to destroy light vehicles and kill dismounted troops. It can also suppress threat gunners out to 1,100 meters. Each BFV has a large on board load of

7.62-mm ammunition. It should be used against suitable targets. As a complement to the 25-mm gun at shorter ranges, it helps save 25-mm ammunition.

### Concentrate on Long-Range Threats

The rifle team weapons are also used to complement the BFVs. These include the M60, automatic weapons, grenade launcher, and Dragon. They are best used along approaches where the fields of fire are limited. The BFV is then free to concentrate on long-range targets.

### Engage Only Targets That Offer a High Probability of Hit

BFV gunners must avoid firing at targets that are out of range. Fire only at targets that will probably be hit by the first round. Random firing at targets wastes ammunition and missiles. It also risks exposing firing positions to the threat.

### Take the Best Shots and Expose Only Those BFVs Actually Needed to Fire

Often, it is not necessary to fire all of the BFVs in position. At these times, only those in the best positions to hit should fire. The others should stay hidden. One case would be when one BFV has a frontal shot, and another a flank shot, on the same target. The BFV with the flank shot should engage. The flank shot is best for two reasons. It gives a better chance to kill the target, and there is less chance that the target will see and fire on the BFV.

The danger that a threat vehicle or weapon system poses for the BFVs changes. Range, terrain, and the weapons it mounts are the factors. As a rule, tanks are the greatest threat to BFVs at ranges to 2,000 meters. At ranges no longer than this, a BRDM or BMP firing an ATGM is more of a threat. A moving BMP is not a real threat until it moves within 1,000 meters. Always engage the greatest threat first. If two targets are equal threats, engage the closest one first.

Ammunition resupply will be a major problem in battle. The platoon must use fire discipline. If this is not used, all ammunition can be spent in one or two engagements. The platoon is then no longer effective. BFV crews must keep checking the ammunition supply. Ammunition report procedures should be part of the SOP. The platoon leader should set the point where resupply should be requested. A BFV should not be allowed to drop below this level. An exception is a combat emergency. Ammunition in the reload racks should be replaced at every chance. This cuts reload time. If there is no ammunition in the ready racks, reload will take much longer.

### STANDARD OPERATING PROCEDURE

The platoon should rehearse battle drills and SOPs thoroughly. This will ensure fast reaction times. The SOP should cover a number of things. Besides battle drills, these include--

- Area coverage responsibilities.
- Turret orientation.
- Weapons-ready procedures.

These should cover different situations, such as road marches or halts.

Battalion or company SOPs should set the combat ammunition load by type and amount. The platoon SOP should set the weapons-ready posture. One example is against a multiple threat. Two BFVs may

be prepared to fire AP. A third is ready with high explosive. The fourth has TOW ready. The platoon is then ready to engage varied targets with the weapons best suited. BMPs would be engaged with the APDS. The HE would suppress ATGMs at long range. Tanks would be engaged with the TOW. The platoon leader may have to adjust the weapons-ready posture after an engagement. Ammunition may need to be redistributed. This is to make sure BFVs are not too low on the ammunition or missiles needed.

## FIRE PLANNING MEASURES

Fire planning and distribution measures must be simple and clear. Their use must be routine. They can then be used without long, detailed instructions. Some simple measures are described in this section.

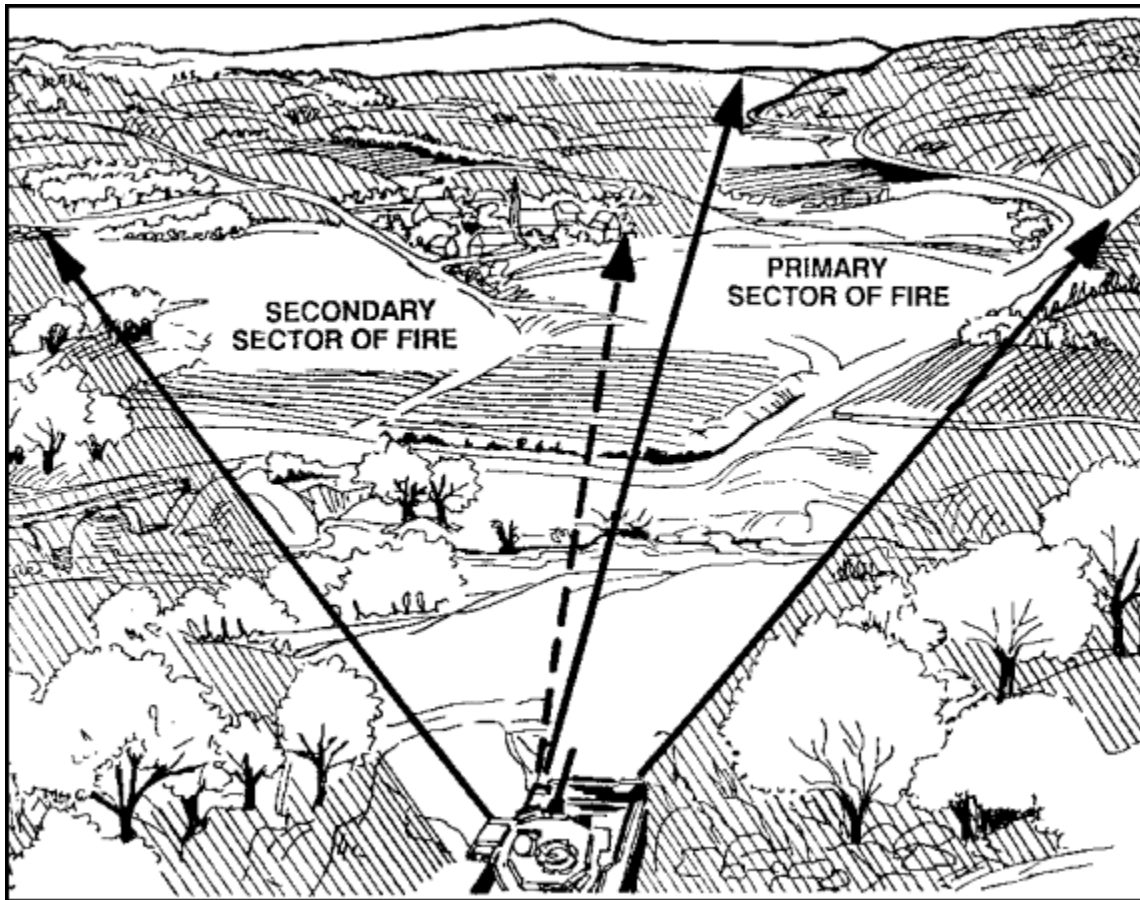
### Sector of Fire

Each squad or platoon is assigned an area to cover. It is specific and clearly identified. This is called the sector of fire. It is set out by easily seen terrain features that outline it. These include roads, streams, hills, and ridgelines. A sector of fire can run from the firing position to the maximum engagement range of the weapons, or it can be an enclosed area at a distance from the firing position. In this case, the terrain between the enclosed sector and the firing position is open. It must be covered by other weapons; these may be those of a tank or a rifle team.

Two things dictate how sectors are assigned. One is the terrain. The other is the number and type of weapons available to cover with. An area should be completely covered with the proper type of fire. This gives mutual support between each vehicle.

Each vehicle is assigned a primary and secondary sector of fire. They are then better able to cover areas and gain mutual support. The secondary sector of one squad is the primary of another.

Fire is shifted to the secondary sector, on order. This is done when there are no targets in the primary sector. It is also done when needed to cover another squad. This happens when that squad is forced to move to an alternate position, or the squad may be out of action to reload its weapons. The primary and secondary sectors of fire are shown in [Figure 3](#). Note the arrows used in the figure. Each ends at a terrain feature that is easy to pick out. Any feature of the land may be used to outline a sector.



**FIGURE 3. PRIMARY AND SECONDARY SECTORS OF FIRE.**

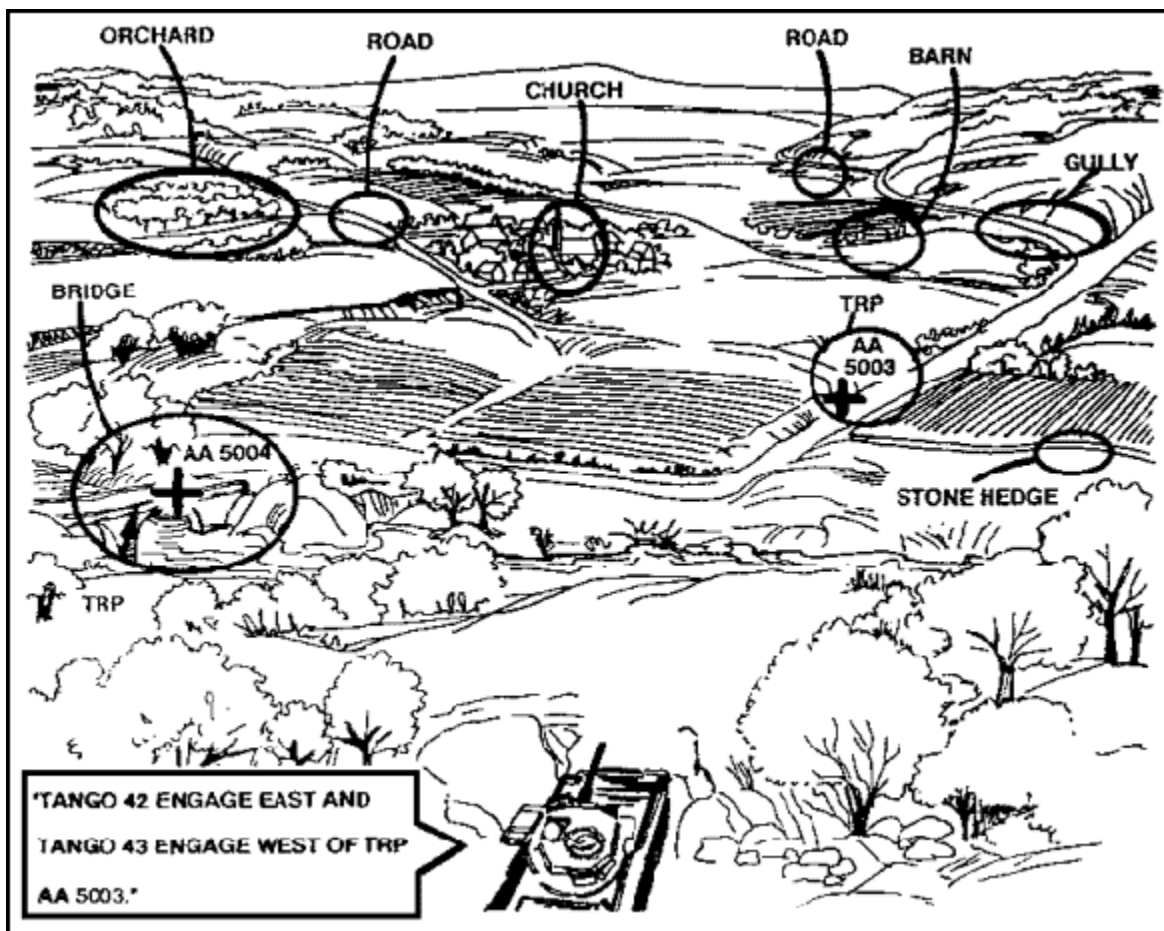
Overlapping sectors of fire may also be assigned. This is done when the avenue of mounted approach is narrow. It is also used to concentrate the fires of the whole platoon. The fires focus on some crucial point, such as a chokepoint. This increases the problem of control. Target overkill is also more likely. So, added control measures are needed. These can include--

- Engagement priorities.
- Fire patterns.
- Target reference points.

The leader must choose positions for control. These should let them observe and coordinate the fire.

#### TARGET REFERENCE POINT (TRP)

Some typical TRPs are shown in [Figure 4](#).



**FIGURE 4. TARGET REFERENCE POINTS.**

The TRP is used to name targets of opportunity. It is also used to shift fire, or assign sectors of fire. In the defense, they are chosen for BFVs along avenues of mounted approach. Only as many TRPs as are needed to control and distribute fire are named. Having too many can confuse gunners.

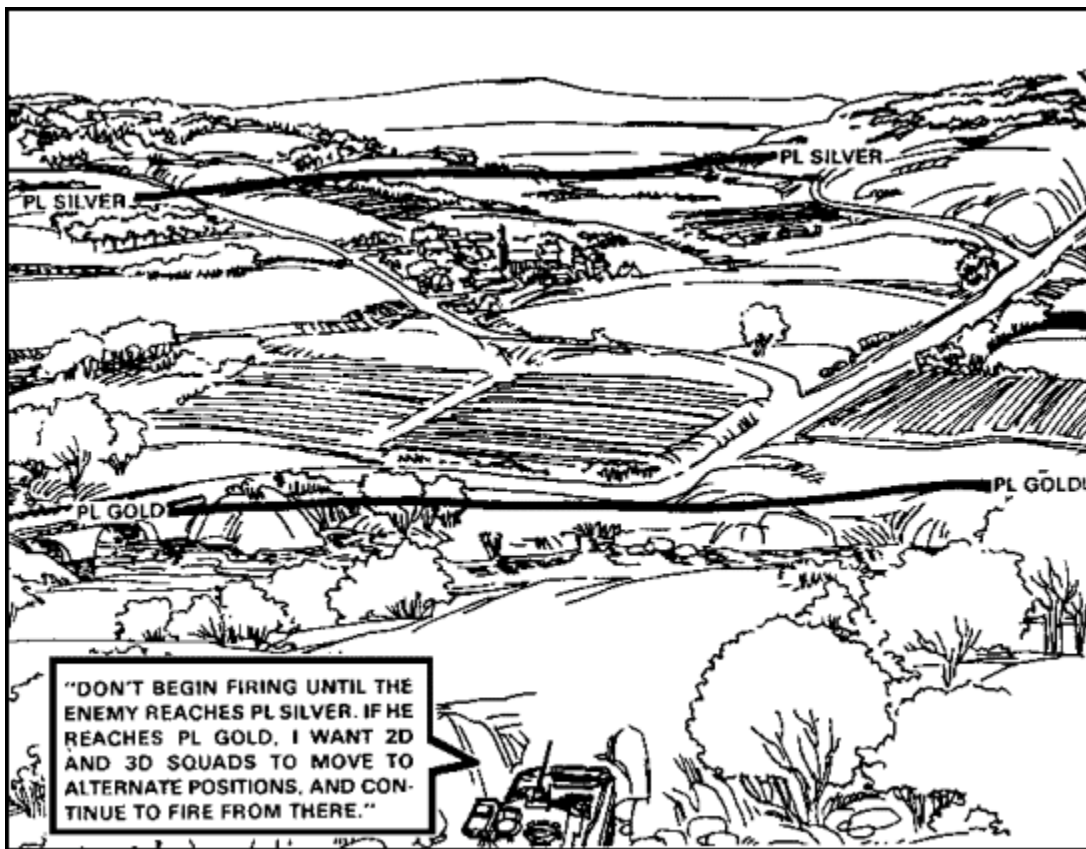
Each TRP is given a number to identify it. This is done by the platoon FO. The number is made up of two letters and four numbers. An example is AB5010. These numbers are placed in the remarks section of the platoon fire plan.

This gives easy reference and coordination. At times, TRPs may be referred to by the last three digits. This simplifies fire commands. As an example, TRP AB5010 may be called TRP 010.

## PHASE LINES

Phase lines are shown in [Figure 5](#). A phase line is a linear control measure. As a rule, it is used to control movement. It can also be used with widely separated BFVs. It controls and distributes their fires. A phase line can be any lineal terrain feature. It may be natural or man-made. Rivers and streams make good phase lines. So do roads and railroad tracks.





**FIGURE 5. PHASE LINES.**

Phase lines are used to get simultaneous actions. They may start, shift, or stop fire, or they may mark the point where BFVs are to move to alternate or supplementary positions. In [Figure 5](#), the platoon leader uses the phase lines to tell the squads when to fire and when to displace to alternate positions. Note the lines in the figure. Phase line GOLD is a stream; phase line SILVER is a ridgeline.

Phase lines can also be used to point out when target priorities are to change. For example, "I WANT ALL SQUADS TO ENGAGE ONLY TANKS WITH TOWs UNTIL THE ENEMY REACHES PHASE LINE SILVER. WHEN THE TANKS CROSS SILVER, THEY WILL BE IN RANGE OF THE TEAM'S ATTACHED TANKS. I WANT YOU THEN TO BEGIN ENGAGING BMPs WITH YOUR 25-MM GUN."

Phase lines are a simple, routine control measure. They are effective. At times, they are used as an emergency control measure. This is done when radio communications are jammed.

#### ENGAGEMENT PRIORITIES

In battle, many types of targets may appear at once. A formation may be made up of tank, BMPs, BRDMs, and so forth. Fire must still be distributed rapidly. The platoon leader must have effective control. He assigns each squad a distinct type of target. It is this vehicle the squad will engage first.

This method is particularly effective during retrograde operations when targets may appear suddenly and there is little time for detailed instructions. But, if a particular target presents a threat to a squad, that target must be engaged immediately, regardless of engagement priorities. Engagement priorities

are useful when sectors of fire have not been assigned or when overlapping sectors of fire have been designated. Like TRPs, they can be used as an emergency measure if communications are lost.

NOTE Engagement priorities should be assigned with care. Two types of targets should be destroyed first. One type is those which are the greatest threat. The other is targets that carry the momentum of the attack. Killing these will break the momentum. Such targets include command vehicles, mine clearers, and bridging vehicles.

## FIRE PATTERNS

There are three basic fire patterns that can be used to distribute the platoon's fire. They are used when multiple targets appear, and no other measures have been assigned. The three patterns are: frontal fire, crossfire, and depth fire.

### Frontal Fire.

Frontal fire is used when targets are dispersed laterally to the platoon's direction of fire. Each BFV shoots targets to its front. The flank BFVs engage flank targets first. When these are destroyed, fire is shifted. It moves toward the target center of the threat formation.

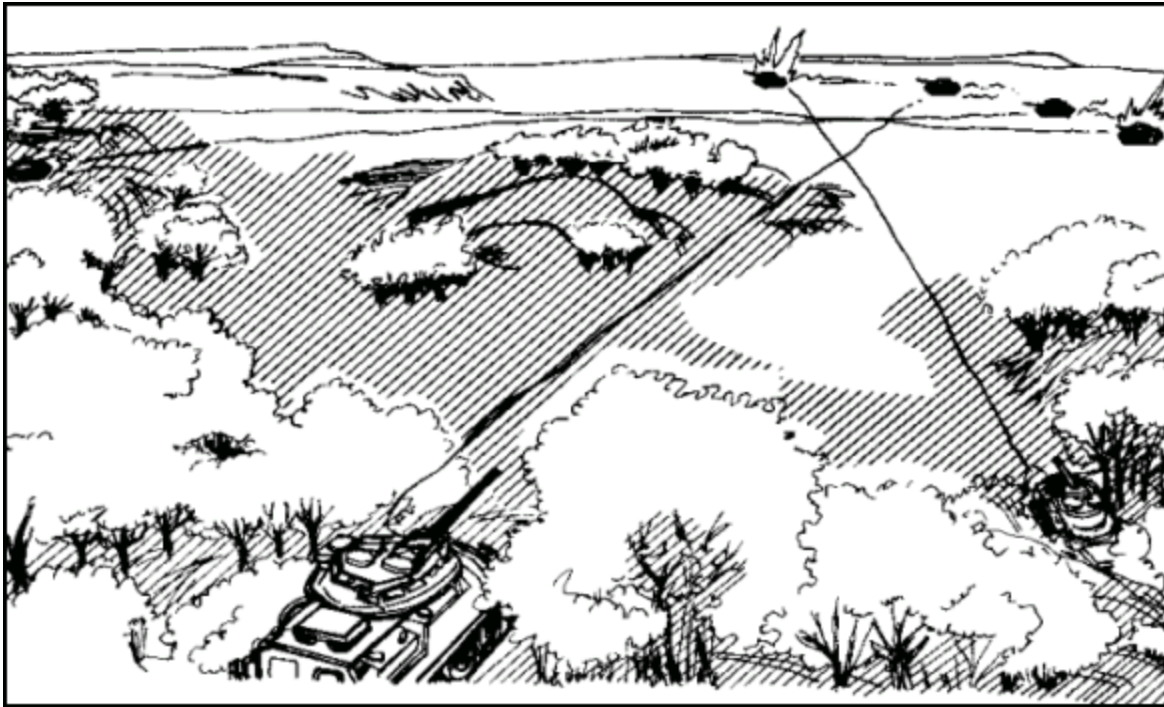
Frontal fire is most effective when the threat is dispersed laterally. The threat should also be moving laterally across the sector of fire. At times, targets will approach head on. This puts their observation and firepower toward the BFVs. It also forces shots at the thickest (front) armor of the target. (See [Figure 6.](#))



**FIGURE 6. FRONTAL FIRE.**

## Crossfire

Crossfire is also used when targets are dispersed laterally. But, in this case, obstructions prevent all BFVs from firing to the front. Crossfire is also used to get flank shots. These increase the chance to kill. They also help avoid detection when the threat is moving straight at the BFVs. Each BFV engages a target diagonal to itself. Flank BFVs engage their opposing flanks. As targets are destroyed, fire shifts to the center of the enemy formation. Crossfire is shown in [Figure 7](#).



**FIGURE 7. CROSSFIRE.**

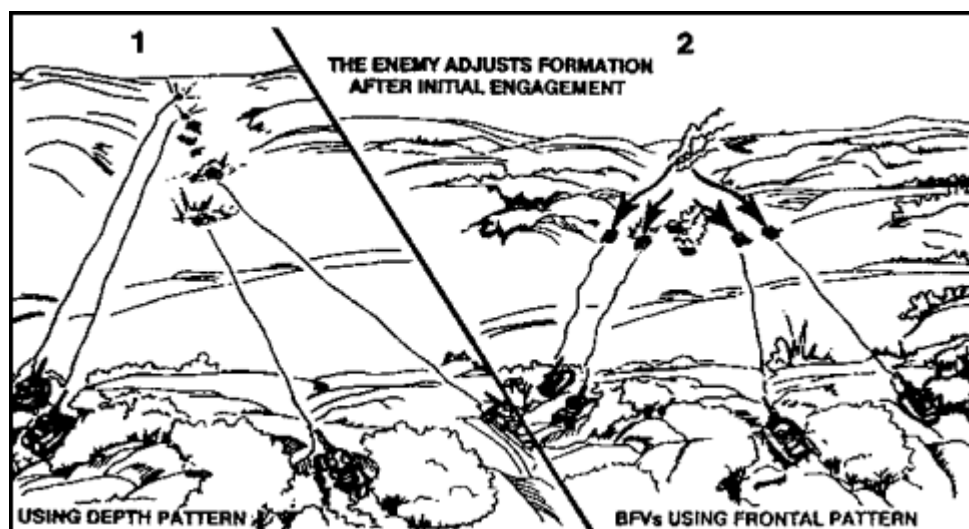
## Depth Fire

Depth fire is used when targets are exposed in depth. BFVs on one side engage the nearest targets. Those on the other side engage the farthest targets. Fire is then shifted toward the center of the formation. This may be done by the SOP, or it may be called out by the platoon leader in his order.

Fire patterns may be changed. They can also be combined with other fire patterns. This is done to give the maximum coverage of the threat. The threat may adjust his information after he has been engaged. Fire patterns may then need to be changed. Targets in depth are shown in [Figure 8](#). A change in fire pattern is shown in [Figure 9](#).



**FIGURE 8. TARGETS IN DEPTH.**



**FIGURE 9. CHANGE IN FIRE PATTERN.**

## FIRE COMMANDS

Speed and accuracy are vital when threat targets are engaged. Commands must be clear and concise. In the stress of battle, the leader must be able to quickly analyze the situation. He must then issue concise and complete fire commands. There can be no delay.

A standard format for platoon fire commands is used. It gives all the needed information in the least time. This format is used even under the worst of conditions. The format for platoon fire commands is given in [Figure 10](#). The elements are issued in the proper sequence.

<b>ELEMENT</b>	<b>EXAMPLE</b>
<b>ALERT</b> _____	<b>"TANGO FOUR ONE - THIS IS TANGO FOUR ZERO"</b>
<b>WEAPON/AMMUNITION</b> _____	<b>"TOW" (or "COAX" or "HE/AP")</b>
<b>DESCRIPTION</b> _____	<b>"FOUR TANKS AND THREE BMPs"</b>
<b>LOCATION</b> _____	<b>"EAST OF TRP 004"</b>
<b>CONTROL (OPTIONAL)</b> _____	<b>"DEPTH"</b>
<b>EXECUTION</b> _____	<b>"FIRE" or "AT MY COMMAND"</b>

**FIGURE 10. FIRE COMMAND FORMAT.**

Examples of typical fire commands are given in [Figure 11](#).



Example 1. Platoon leader's fire command to engage assaulting BMPs with all BFVs of the platoon:	
ALERT	TANGO (entire platoon) — THIS IS TANGO FOUR ZERO
WEAPON/AMMUNITION	AP
DESCRIPTION	TEN BMPs
LOCATION	FRONT — 2000
CONTROL	CROSS
EXECUTION	FIRE
Example 2. Platoon leader's fire command to engage assaulting BMPs and dismounted infantry:	
ALERT	TANGO — THIS IS TANGO FOUR ZERO
DESCRIPTION	BMPs AND INFANTRY
WEAPON/AMMUNITION	AP
WEAPON/AMMUNITION	TANGO FOUR TWO — COAX
LOCATION	FRONT 500
EXECUTION	FIRE
In this command, the platoon leader alerted the entire platoon, which indicated he wanted all BFVs to fire, but he specified that the 2d Squad would engage the infantry by the command, "TANGO FOUR TWO — COAX." The other BFVs would engage the BMPs with 25-mm APDS rounds.	
Example 3. Platoon leader's command to continue the above engagement after the BMPs are destroyed:	
ALERT	TANGO — THIS IS TANGO FOUR ZERO
WEAPON/AMMUNITION	TANGO FOUR FOUR — COAX
EXECUTION	TANGO FOUR ZERO AND FOUR ONE — CEASE FIRE
In this command, he instructed the platoon sergeant with the 3d Squad to shift fire to the infantry using the 7.62-mm coaxial machine gun, he instructed his own vehicle and the 1st Squad to cease fire, and he instructed the 2d Squad to continue engaging with the coaxial machine gun. Although the command did not mention the 2d Squad, members of that squad would continue to fire based on their last instructions.	
Example 4. Platoon leader's command to break off the engagement:	
ALERT	TANGO — THIS IS TANGO FOUR ZERO
EXECUTION	CEASE FIRE
Example 5. Platoon leader's fire command to engage assaulting tanks with his BFV and one other BFV:	
ALERT	TANGO FOUR ONE — THIS IS TANGO FOUR ZERO
DESCRIPTION	TWO TANKS
LOCATION	TRP 003 — 2800
CONTROL	CROSS
EXECUTION	FIRE
Because the targets are tanks, the 1st Squad leader would know that he was to engage with the TOW, even though the TOW is not mentioned in the fire command.	
Example 6. Platoon sergeant initiating target engagement:	
ALERT	TANGO FOUR TWO — THIS IS TANGO FOUR FOUR
WEAPON/AMMUNITION	AP
DESCRIPTION	TWO BRDMs
LOCATION	LEFT FRONT — 1500
CONTROL	CROSS
EXECUTION	FIRE

FIGURE 11. EXAMPLE FIRE COMMANDS.

On this type of ammunition is given to designate the 25-mm gun. This shortens the fire command. TOW commands can also be shortened in the SOP. When a command includes TOW, it may mean that the target is a tank, unless another target is named. Then, when tanks and BMPs appear at the same time, both can be engaged.

Practice of the fire commands must be constant. They must be issued quickly and clearly. Bradley commands and gunners must react at once when an alert is given. Practice alone can achieve this.

## PLATOON FIRE PLANNING

Platoon fire planning is part of the leader's troop-leading procedures. It starts as soon as the platoon leader gets a mission. It goes on until the mission is accomplished. The platoon fire planning tells how fire is to be distributed and controlled.

### Section Fire Control

While mounted, fire control is achieved by one of three methods of section fire control. These will be discussed next.

Alternating Fires. These may be used in several ways. When in the defense, continuous fire from the same place soon gives the threat a fix on the position. Alternating fires lets one BFV shift firing positions while another fires. BFVs in the defense can give away their position with continued fire. By alternating, they avoid this. Constant fire is delivered, but from different positions. At long ranges (2,500 meters or more), the pair can alternate firing and observing. When both know their fire is effective, simultaneous fires can be used.

Simultaneous Fire. This is when both vehicles of a section are firing into their assigned sectors at the same time. It is used when moving unprotected. It is also used when surprised by many threat vehicles.

Observed Fire. In this method, the firing vehicle engages targets. His wingman observes the effects of the fire. He then helps to spot and correct fire. The wingman also gives local security. This lets the firing vehicle concentrate on the firing. If there is a weapons malfunction, or low ammunition, the wingman takes over firing. This method is also used when only one target is in the sector. It is the normal method of fire from protected positions at or near maximum range.

### Defensive Fire Planning

Defensive fire planning is more deliberate and detailed. This is because there is more time to consider these factors:

- Individual BFV targets.
- Platoon targets.
- Indirect fire targets.
- Fire distribution and control measures.

To develop the defensive fire plan, the platoon leader makes assignments. Each squad BFV is given a primary and at least one alternate firing position. They are also given a sector of fire. The platoon leader also names the platoon point or area targets. Other control measures are used. These include TRPs, engagement areas, or target priorities. They coordinate the fire if two or more vehicles are firing in the same area or sector.

The platoon leader gets target information from squad leaders. Most of the time, it is given on sector sketches and range cards. With this information, he can see that fire is evenly distributed and that control measures will work.

When the platoon leader completes the fire plan, he gives a copy of the sector sketch to the commander of the larger force. If there is time, he has each squad leader copy the sketch. If not, the squad leaders may get only a quick briefing.

### BFV RANGE CARD

A range card is a rough sketch of the terrain a weapon is to cover. It shows possible target areas and terrain features. These are plotted in relation to a firing position. The range card data is used to--

- Plan and control fire.
- Detect and engage targets.
- Orient replacement personnel or units.

A BFV gunner makes a range card for his BFV. He makes one for each primary, alternate, and supplementary position. One is also drawn for any static position when enemy contact is possible. An example is for an assembly area.

Each range card must have at least the following information:

- The symbol for the weapon covering the sector.
- The azimuth (degrees) and distance (meters) of the firing position from an easily recognizable terrain feature. (This serves as an easy reference to locate the firing position.) If there is no recognizable terrain feature, an eight-digit grid may be used.
- The boundaries of the area assigned to be covered by observation and fire.
- Areas where targets are likely to appear (engagement areas) and the range, azimuth, and elevation to them from the firing position.
- Dead space, that is, areas that cannot be observed or covered by fire.
- The direction.
- Identification data:
  1. Unit designation (no higher than company/troop).
  2. Time and date of preparation.
  3. Firing position (primary, alternate, or supplementary).
  4. Magnetic north arrow.

The gunner prepares a range card as soon as he can after moving into position. Two copies are made. One is kept on the BFV, the other goes to the platoon leader. The standard form is best for drawing the range card. If need be, the gunner may use anything he can write on. The range card should be drawn as shown in [Figure 12](#).



<b>STANDARD RANGE CARD</b> <small>For use of this form see FM 7-7J. The proponent agency is TRADOC.</small>					
SQD <u>1ST</u> PLT <u>3RD</u> CO <u>B</u>					 MAGNETIC NORTH
<b>DATA SECTION</b>					
POSITION IDENTIFICATION <b>PRIMARY</b>				DATE <u>1 JULY 85/0835</u>	
WEAPON <u>BRADLEY B-31</u>				EACH CIRCLE EQUALS <u>500</u> METERS	
NO	DIRECTION DEFLECTION	ELEVATION	RANGE	AMMO	DESCRIPTION
1	5970 M / 5420 M				LEFT LIMIT / WINDMILL
2	1610 M / 0920 M				RIGHT LIMIT / ORCHARD
3	5440 M	-10		AP	TRP 1 / BRIDGE WELCH ROAD
4	5830 M	+5		HE	TRP 2 / RJ 501
5	0220 M	-3		AP	TRP 3 / BEIUSE WELCH ROAD
6	0240 M	+2		HE	TRP 4 / RJ 4-78
REMARKS: WPNS REF POINT - FROM RS 460, MAZ 298° - 500M					
DA FORM 5517-R, FEB 86					

**FIGURE 12. BFV RANGE CARD.**

The BFV map symbol is drawn in the lower center of the range card. The sector of fire is shown by drawing arrows from the BFV symbol to the left and right limits. Terrain features that are easy to identify are sketched in. These identify the sector. The data section is then filled in. The magnetic azimuth and deflection are entered. These are taken from the azimuth indicator in the turret. The range is given to the far limits of the sectors of fire.

In the sector sketch, left and right limits are labeled one and two. A circle is drawn around each number. These should be the first items drawn and labeled in the sector sketch. They should also be the first entered on the range card data section. The azimuth, deflection, and range are not placed on the left and right limit lines.

Target reference points are then entered. The Bradley commander indicates where they are placed. They are also put in at any point where a target is likely to appear. The TRPs are then numbered in the sketch section.

NOTE Arrows are not drawn from TRPs and likely target engagements to the vehicle  
: position.

The maximum engagement line is then drawn in. This is placed across the sector of fire for the 25-mm gun. One is also drawn for the TOW and the 7.62-mm machine gun. These lines show the maximum ranges at which a target can be effectively engaged.

NOTE There may be more than one maximum engagement line for the 25-mm gun  
: (HEI-T/APDS-T) and the TOW.

Dead spaces are shown by diagonal lines across the area, and writing "dead space." These are spaces where targets cannot be engaged with direct fire.

A magnetic north line is drawn. This orients the range card to the terrain. Then, identification data is added. The unit is designated. This should be done no higher than company/troop level. The time and date prepared is given. The type of position is also given. The data for the weapon reference point is put in the remarks block.

#### MARKING A FIRING POSITION

After the range card is drawn, the position should be marked with ground stakes. The position can then be reoccupied, using the same data. Three stakes are used.

One stake is placed in front of the BFV. It is centered on the driver's station, touching the hull. This stake should be long enough for the driver to see it. The other two stakes are placed along the left track. One is lined up with the front wheel hub. The other lines up on the rear road wheels. The stakes are placed close to the BFV. Only enough clearance is left for the driver to move in without knocking them down.

The stakes should be driven deeply so that a strong wind will not knock them down. Engineer tape or luminous tape can be placed on the friendly side of the stakes. This makes them easier to see in limited visibility.

#### Moving Into Position

A ground guide can be used (when possible) to help move the BFV in. Once in position, the gunner should check one of the targets on the range card. To do this, he can index the range and azimuth of the target. If the sight is on the target, the position is correct. The data from the range card may be used. If the sight is not on the target, the vehicle must be adjusted. The gunner tells the driver which way to move the BFV. Only slight adjustments should be needed.

#### CONCLUSION

Fire control and distribution are key aspects of the platoon defense. The effectiveness of the platoon depends on them. Range cards and sector sketches must be prepared with care. Fire commands must be practiced until reaction to alerts is instant. SOPs will aid in this. They must be developed and practiced.

Control measures must be well thought out and checked. Fire power is one of the Bradley's greatest assets. Use it to the fullest extent to accomplish missions.

#### Learning Event 4: IDENTIFY DEFENSIVE TACTICS AND TECHNIQUES USED BY THE BRADLEY PLATOON FOR CONDUCTING DEFENSIVE OPERATIONS

The Bradley platoon should make full use of its assets in the defense. These assets give it options never before open to an infantry force. In this learning event, you will see how to apply these assets with defensive tactics and techniques.

#### DEFENSIVE TACTICS AND TECHNIQUES

The platoon defense should make full use of all that the Bradley offers. The BFV gives firepower and armor protection. It is swift and agile. Thermal vision allows it to see in nearly any conditions. In dismount, the foot soldier adds his fighting ability. All of this adds up to a tremendous defensive power.

##### Positions

The platoon must position elements for the greatest effect in the defense. BFVs defend against attack along mounted avenues of approach. Rifle teams cover avenues that restrict mounted movement. They also cover the reverse slopes of mounted avenues. They can deliver surprise fires on the threat vehicles with LAWs and Dragons. On reverse slopes, they are not subject to long-range suppression by the threat.

#### BASIC TACTICS

The BFV offers defensive options that a combined arms team has not had before. The turret weapons let the BFV fight in its own right. Bradleys can fix or limit the threat. This allows tanks to be consolidated and to deliver a powerful counterattack.

##### Fixing the Threat

Fixing the threat denies him the chance to withdraw part of his force for use elsewhere. It is done by the Bradley by use of firepower and maneuverability. The dismounted infantry support this. They dig in on restrictive terrain or on the reverse slope. This fully exploits the advantage of the defender. That is the ability to prepare the battlefield.

##### Control of Elements

As in the offense, dismount brings a change in leadership. The command and control structure changes to meet the needs of two forces. Overall control of the platoon stays with the platoon leader, but he keeps direct control of only the maneuver force. Control of the other force is given to the platoon sergeant. One leader concentrates on fighting the dismount force. He uses dismount tactics to exploit restrictive terrain. The other concentrates on the BFV fight. At times, the two forces will separate from each other, but they must still fight in relation to each other.

Two major assets of the BFV are firepower and survivability. The leaders must optimize these assets. This is done through the use of--

- Movement.

- Cover and concealment.
- Dispersion.
- Mutual support.
- Flank shots.
- Stand-off range.
- Employment in depth.

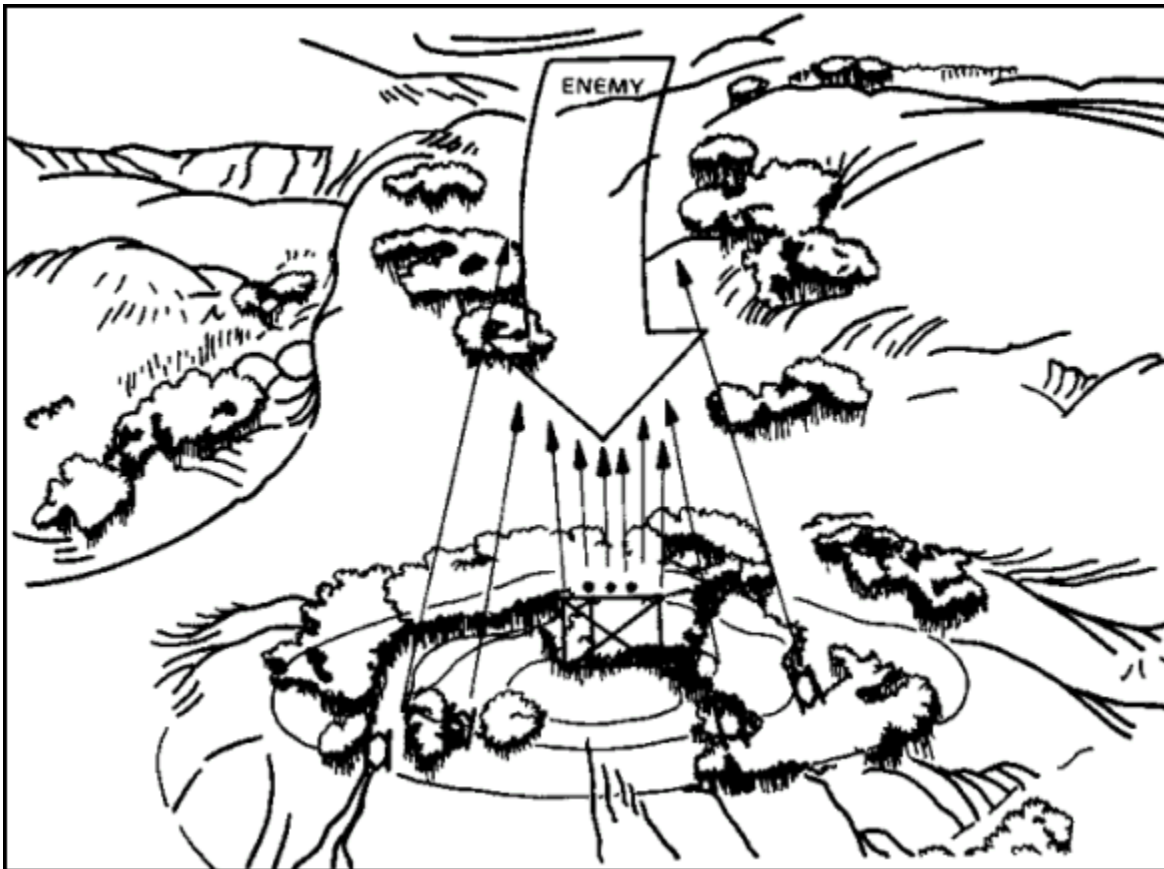
## METHODS OF EMPLOYMENT

There are three basic methods of employment for the Bradley platoon. These are as follows:

- Same battle position, same avenue of approach.
- Same battle position, different avenues of approach.
- Different battle positions, same avenue of approach.

BFVs and Dismount Infantry on the Same Battle Position, Covering the Same Avenue of Approach.

With this method, the platoon can defend against mounted and dismounted attacks. It can also move rapidly to another position. (See [Figure 13.](#))



**FIGURE 13. SAME BATTLE POSITION, SAME AVENUE OF APPROACH.**

Within the battle position, the BFV may be positioned with the rifle teams forward or around the vehicles for security. Normally, if the dismounted avenue of approach is the most dangerous to the platoon and the terrain is restrictive, the BFVs will be positioned based on their ability to employ the

7.62-mm coax in support of the dismounted positions. Otherwise, the BFVs are positioned to take advantage of their long-range fires and the infantry either provides them security or takes up positions on a reverse slope.

The BFVs remain on the same battle position as the rifle team when the terrain provides good observation, fields of fire, and cover and concealment to both dismounted infantry and BFVs. In addition, the battle position must provide fields of fire that take advantage of the restrictive terrain that dismounted infantry prefers and or provide protection for the dismounted infantry from the long-range fires of the enemy.

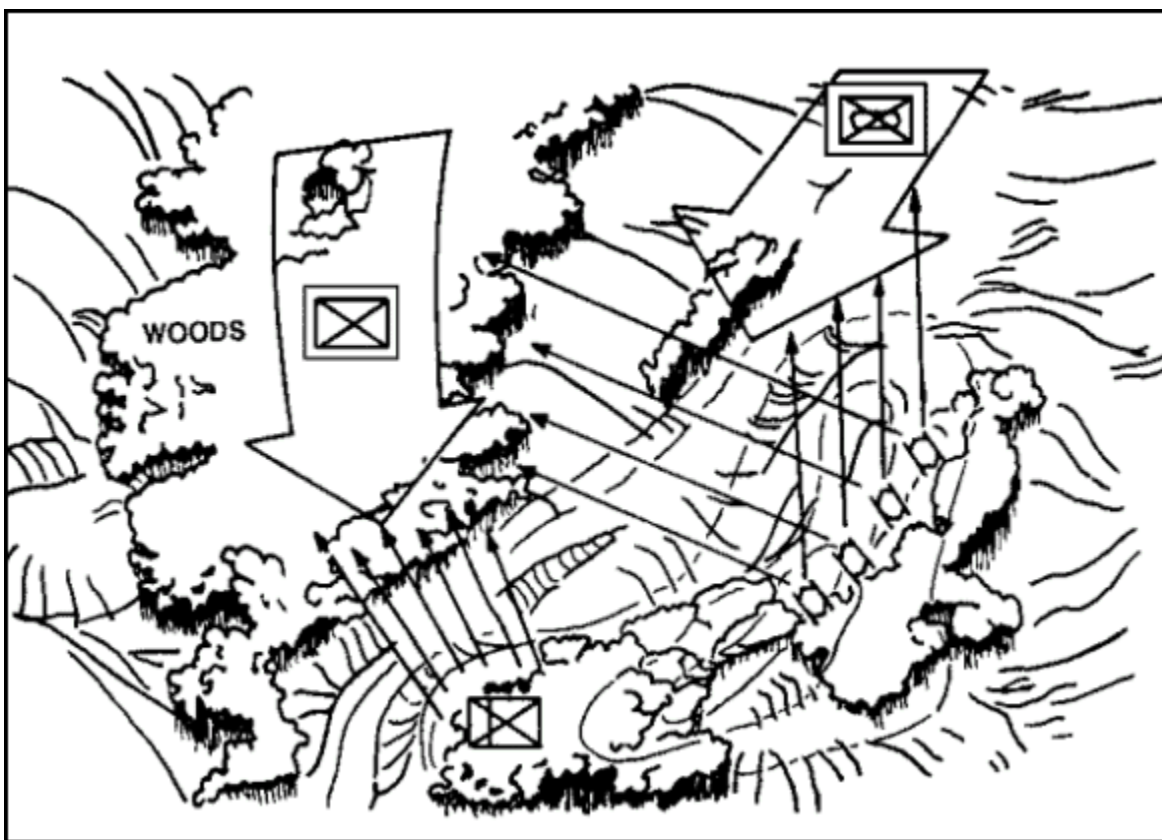
The platoon leader makes assignments. Each vehicle and rifle team is given a primary position and sector of fire. Alternate positions are also given. The platoon leader also calls out who will man OPs and where the OPs are to be set up. In time, the OPs are adjusted. This is done to better fit into the company team reconnaissance and surveillance (R&S) plan.

The platoon leader supervises the placement of each BFV. He ensures that it ties in with the others by his concept of the defense. Often, this means that the BFVs are offset to the flanks. This gives better long-range shots.

This method is a conservative use of the Bradley platoon. Its main advantages are--

- Command and control are eased. Both forces are in the same place, focused on the same approach.
- BFVs are easy to remount.
- BFVs have more security. This is because the rifle teams are close.

Same Battle Positions, Different Avenues of Approach. (This method is shown in [Figure 14.](#))

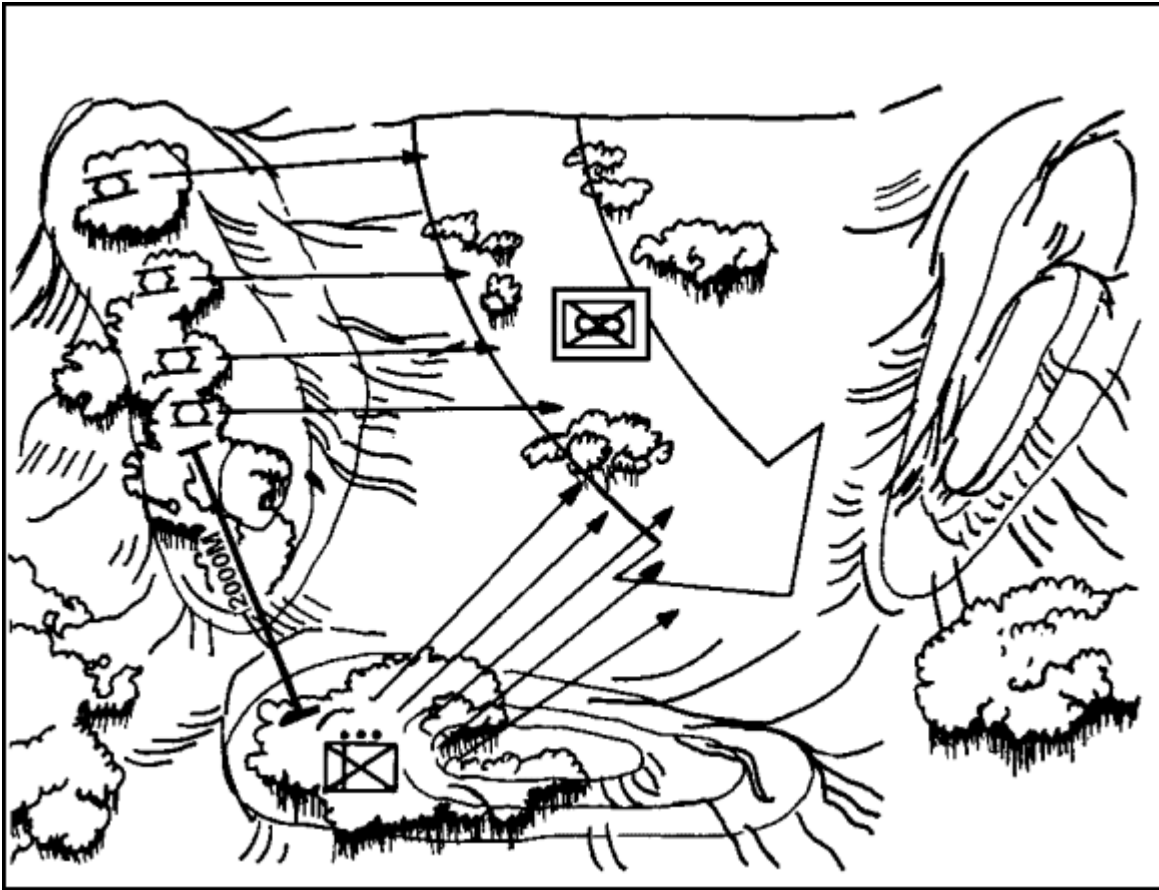


**FIGURE 14. SAME BATTLE POSITION, DIFFERENT AVENUES OF APPROACH.**

This is used when the position has two avenues of approach of equal danger. One has short-range field of fire. The other has long-range fields of fire. The BFV covers the long-range avenue with its fires. The rifle team is placed to cover the short-range avenue. Each force is then on terrain best suited to it. During limited visibility, security should be increased. To achieve this, the platoon leader will often reposition some of the dismount force.

Plans must be made to shift the BFVs. The dismount approach can become the most dangerous if the mounted approach is ignored by the threat. In this case, the BFVs would use their speed to reposition. When nearer to the dismount force, they add their 7.62 coax fire in support of the rifle teams.

Different Battle Positions, Same Avenue of Approach (This method is shown in [Figure 15.](#))



**FIGURE 15. DIFFERENT BATTLE POSITIONS, SAME AVENUE OF APPROACH.**

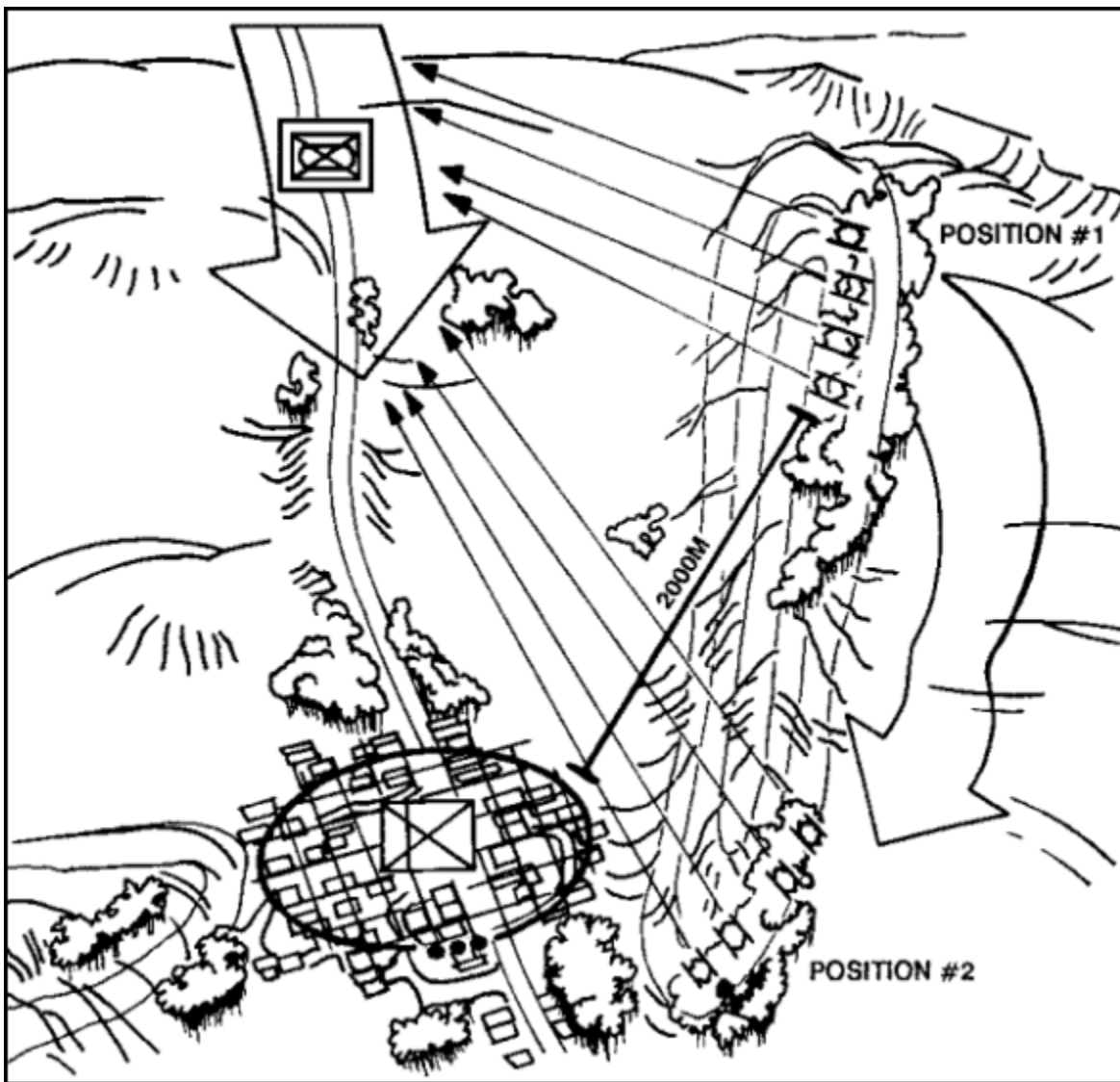
If positioned on separate battle positions, BFVs and dismounted infantry must fight in relation to each other and cover the same avenue of approach. Fighting in relation to one another means that the BFVs are able to provide the dismounted infantry with supporting fires from their primary, alternate, or supplementary positions. Both elements are positioned to engage enemy forces on the same avenue of approach, but at different ranges. This will normally equate to a maximum of three-fourths of the effective range (approximately 2,000 meters) of the BFVs primary armament--the 25-mm gun. This ensures that the BFV fires can reach and overlap the dismount positions. As long as they are fighting in relation to each other, the platoon leader will normally continue to control both elements.

#### Bradleys Displacing to Support Dismount Element

At times, there is a need to gain better observation and fields of fire. This makes better use of the BFVs weapons.

The BFVs are then used forward of the dismount force, on the same avenue of approach. The Bradleys displacing process is shown in [Figure 16](#).





**FIGURE 16. BRADLEYS DISPLACING.**

The dismount element must use all the time it has to prepare the positions. This includes setting up obstacles. When the threat attacks, the BFVs will engage their formations. They then move to the flank or rear of the dismount force. This is done by a signal or event arranged ahead of time. The timing of this move is crucial. The best use of the BFVs is made by fighting them forward. But this also leaves them more open to fire as the threat closes.

#### Platoon Leaders' Position

The BFV force will be the first to see and engage the enemy. The timing of moves to alternate or subsequent positions is crucial. As you have seen, the platoon leader controls the BFV force. The platoon sergeant controls the dismount force. At times, though, other methods are needed. One example is when the main fight is expected to be dismounted. The platoon leader would then stay forward with the dismount force. As the situation develops, he may choose to move. He might move to the BFV force, or he may choose a position which lets him better control both forces. In this way, the platoon leader stays abreast of the situation. He also has the most control where the main fight is expected.



Control is hardest with the forces separated. The commander of the larger force may tell the platoon leader which force to locate with.

### Dismount Force Planning

The leader of the dismount force must plan for operations without the support of his BFVs. He must plan for the supplies to be with the dismount force. He must also consider how long the team will be apart, and how quickly his force can remount.

### BFVs Forward

The BFVs may be used well forward for a certain mission. When that mission is complete, they displace. Their position is then in support of the dismount force. One such mission is long-range antiarmor engagements. In such fights, the BFVs must avoid decisive engagements. They must be free to displace to their next positions. Rifle teams are placed to the rear. They improve positions and emplace obstacles.

### Company Control

There are times when the Bradley platoon's mounted and dismounted forces are not fighting in relation to each other. Control of these forces is then consolidated at the company team level. The company team 21C is used to do this.

A company or company team commander may consolidate the company's dismount forces in one location. The BFVs are deployed separately in the situations which follow:

- A large number of dismounted troops are required to hold a position, such as a strongpoint.
- Primary position for the dismount force does not have adequate fields of fire for the BFVs weapons.
- The dismount force must occupy heavily wooded or rugged terrain that the BFV cannot traverse.
- Both mounted and dismounted avenues of approach must be defended. Terrain is such that both cannot be defended from the same position.

In these situations, the dismount force and the BFVs may not be able to support each other at first. Plans should be made to use the BFV's speed for repositioning. The BFVs then support the dismount force from supplementary or subsequent positions.

Plans may be modified in limited visibility. Added security may be given to the BFVs. This may be done by moving a rifle team to the BFV's position. It can also be done by rejoining the platoon on a single battle position.

### REVERSE SLOPE DEFENSE

The estimate of the situation will often require the company team commander to employ his elements, especially his dismounted infantry, on the reverse slope. If the factors of METT-T require the employment of dismounted infantry on what is essentially a mounted avenue of approach, the dismounted infantry must be concealed from the enemy at ranges beyond which their own weapons are effective.

This means that the dismount force should be protected from threat tank gun and observed artillery fire. This is true even when friendly forces are fighting with their tanks and ATGMs. Ideally, the dismount force is deployed to protect it. They are not open to fire from threat direct fire systems that cannot engage.

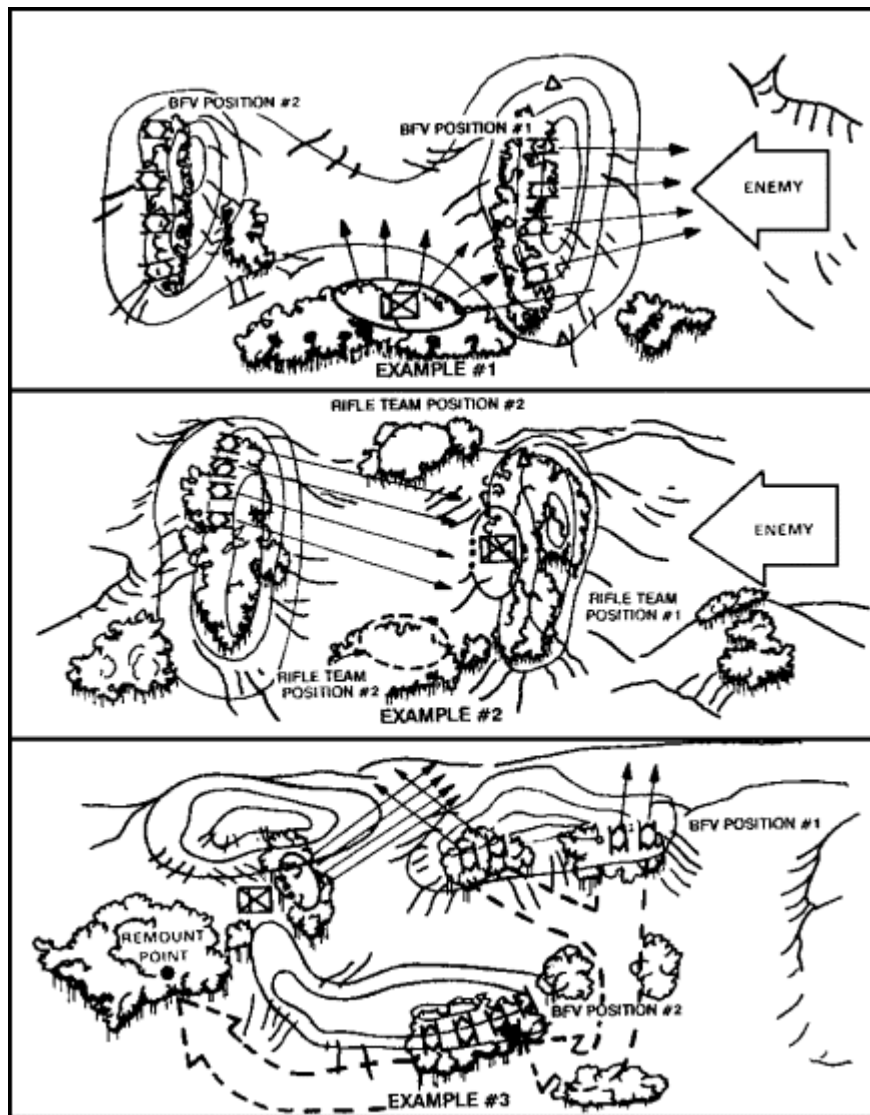
Most of the weapons in the dismount force are not effective beyond 600 meters. The reverse slope defense may be used to protect them from fires beyond that range.

To some extent, this conflicts with the need for maximum observation forward to adjust indirect fire on the enemy as well as the need for long-range fields of fire. In some cases, the tanks, BFVs and ATGMs must be deployed forward. The dismount force stays on the reverse slope. As the battle closes, the vehicles withdraw from their forward positions. As the battle closes, the vehicles withdraw from their forward positions. Their new positions should make full use of the BFVs long-range fires. This can deliver enfilade shots from the depth and the flanks of the reverse slope.

At night, the nature of the threat may change. The dismount force may then occupy the forward slope or crest to deny it to the threat. In these cases, the dismount forces may have an alternate night position forward.

The area forward of the crest must be controlled by friendly forces. This is done with aggressive controls, and active as well as passive reconnaissance means. The threat must not be allowed to take advantage of reduced observation. He would use this to move to a position of advantage without being taken under fire.

Advantages of Reverse Slope Defense (See [Figure 17.](#))



**FIGURE 17. REVERSE SLOPE DEFENSE OPTIONS.**

There are a number of advantages in the use of the reverse slope defense. These are as follows:

- Threat ground surveillance of the position is masked.  
This includes surveillance devices and radar.
- The threat must come within range of the defender's weapons to engage with direct fire.
- The threat's indirect fire will be less effective. This is due to reduced observation.
- The threat may be deceived about the strength and location of the positions.
- The defenders will have more freedom of movement out of sight of the threat.

#### Disadvantages of Reverse Slope Defense

The disadvantages of the reverse slope defense are listed here:

- Observation to the front is limited.
- Field of fire to the front are reduced.
- Threat is able to launch his attack from a closer range.

## When the Reverse Slope Defense is Used

The decision to use the reverse slope defense is made by the company team commander. As a rule, he will choose this defense when--

- A unit wants to surprise or deceive the threat about the location of its defensive position.
- A forward slope may be made untenable by direct threat fire.
- The forward slope does not need to be occupied to achieve depth and mutual support.
- The fields of fire on the reverse slope are better; or, they are at least good enough to accomplish the mission.
- The forward slope is likely to be the target of intense artillery fires.

## The BFV in the Reverse Slope Defense

The BFV offers options in positioning that were not possible before. BFVs can initially be positioned forward. This makes full use of their protection from artillery. It also uses their ability to engage at long range. After the initial engagement, the BFVs may move over or around the crest line. They move through the dismount force on the reverse slope. Their new position is either on the flanks, or farther in depth to the rear.

## Obstacles

Obstacles are also needed in the reverse slope defense. The threat will be engaged at close range by the units on the reverse slope. Obstacles should be emplaced that--

- Keep the threat from closing too quickly and overrunning the positions.
- Ease disengagement if decisive engagement is not desired.

## VEHICLE POSITIONS

The platoon leader chooses positions for his BFVs. He does this with guidance from the company team commander and based on the factors of METT-T. Each vehicle's position should provide--

- Cover, especially to the front.
- Concealment from ground and air observation.
- Good fields of fire into the most likely avenues of approach.
- Covered and concealed routes to and between positions and to the platoon remount point.
- Mutual support between positions.

## Weapons Systems

Each vehicle should have a primary position and as many alternate positions as needed to cover the entire sector of fire. Supplementary positions should be designated to cover secondary sectors of fire. These may also cover the next most dangerous avenue of approach. If the BFVs are fighting apart from the dismount force, they must be able to support these positions. All three weapon systems should be considered when positions are selected and prepared. The platoon leader should name the primary weapon system to be used at each position. The 25-mm gun and the 7.62-mm coax can fire between trees and through light vegetation. Care must be taken when firing 25-mm armor-piercing discarding sabot. It must not be fired over friendly troops within an arc of 10 degrees on either side of the gun and

within 175 meters. The plastic sabot falls away from the projectile when this round is fired. It can cause serious injury to personnel. The same is true of the tank's main gun sabot. In this case, the danger zone is 1,000 meters forward and 70 meters on either side.

#### Use of the TOW

The TOW can kill tanks at a range of 3,750 meters. This is more than the range of threat tank main guns. Their range, as a rule, is 1,500 to 2,000 meters. This gives the BFV a standoff advantage with the TOW. TOW positions must have unobstructed fields of fire. They should also have a clear backblast area, and must fire from a level area of terrain.

The TOW has a high-kill probability on any tank it hits. This probability rises if the TOW hits the tank's weaker side armor. Flank engagements are best. This is because a tank crew's observation, and its main gun, are oriented to the front. The flank shot reduces the chances for detection. It also improves the chances for a kill.

#### Avoiding Threat Fires

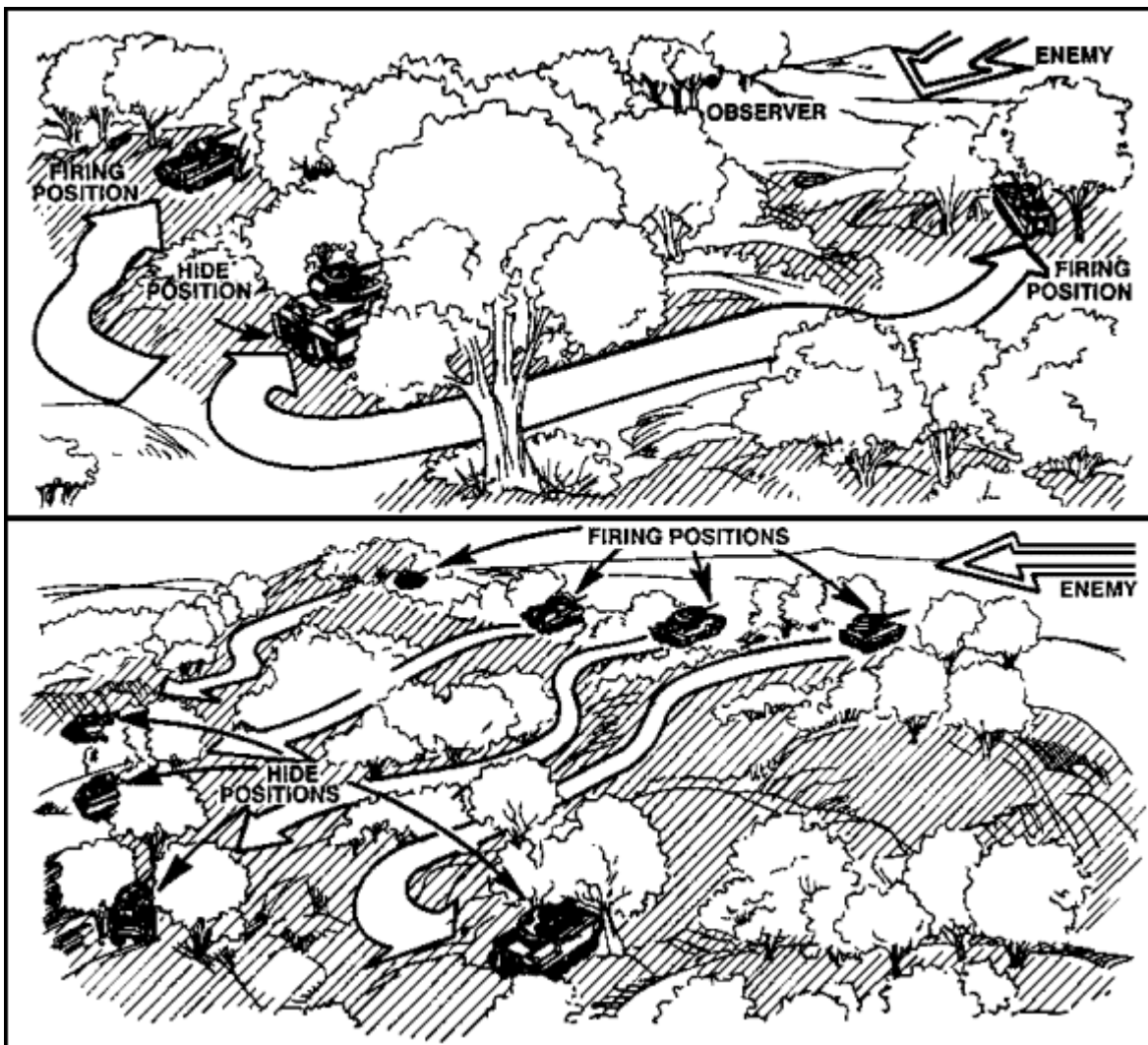
The BFV cannot survive against antiarmor missiles, or direct fire weapons larger than 14.5-mm. It is vulnerable in this way. There are two ways to overcome this. One is to stay concealed and give surprise fire. The other is to fire at maximum ranges and displace to alternate positions. This keeps the threat from placing effective fire on the BFV. When one BFV displaces, others should give cover fire. This keeps the enemy under a constant stream of fire. He is not able to acquire and engage targets.

#### BFV Separation

The threat will try to suppress with fires and smoke. The BFV force should be positioned for separation. The BFVs should be as far apart as possible while still giving mutual support. Chances of the same fire being used to suppress two or more BFVs are then reduced. About 100 meters is a good planning figure between BFVs.

#### Hide Positions

Hide positions are shown in [Figure 18](#). These should be out of the direct fire line of the threat. They both protect the BFVs and conceal their true positions. This lets them give surprise fire on the threat. Hide positions should be prepared when there is time. They should be hull down if possible. Movement from hide to firing positions should be rehearsed.



**FIGURE 18. HIDE POSITIONS.**

When the dismount force is the BFVs, the infantrymen can observe the sector. They then call the BFVs into position when targets appear. The hide-position method can be used by single BFVs or the whole platoon. When the BFV and dismount forces are separate, the BFV leader may have to dismount. He then moves forward to observe the sector.

The use of hide positions helps avoid early detection. Routes from hide to firing positions should be concealed. The observers and BFV force must communicate. This may be done by visual signals, wire, or radio. Each BFV should have several firing positions for a single hide position. This lets it engage at long ranges, and move before the threat can return fire.

#### Artillery Barrages

In some situations, the platoon may not have time to prepare their fighting positions. The threat may deliver an artillery barrage at these times. The platoon can still protect itself; the BFVs move to covered and concealed positions. These can be to the flank or rear of the intended position. They wait through the barrage, then occupy the position. The platoon leader positions himself to observe avenues of approach. This lets him decide the proper time to move.

## Hull-Down Position

In the hull-down position, only the turret is exposed. The hull is protected by cover. This is shown in [Figure 19](#). The turret can also be camouflaged; it is then hidden, but can still fire the turret weapons. The 25-mm gun should be fully depressed when the position is first entered. Then, close-in targets can be engaged without moving the vehicle.



**FIGURE 19. BFV HULL DOWN.**

Added protection is given by the turret-down position. The BFV has cover to the front, but the Bradley commander can still see what is to his front. The driver moves into the fighting position hull down; the gunner then directs him in reverse until he can no longer see through his sights. The turret will then be covered from the front. To engage, the driver moves the BFV forward until the gunner has fields of fire. (See [Figure 19](#).)

## RIFLE TEAM POSITIONS

Rifle teams are best used against the most dangerous dismounted avenues of approach. These include small towns, rugged terrain, and thick woods.

The rifle team may face either a mounted or dismounted threat. The platoon leader must plan for this. He should choose restrictive mounted approaches to position rifle teams. These include secondary roads, trails, and roads bordered by obstacles.



The rifle team at full strength has six infantrymen. They are, as a rule, placed in three two-man positions. These positions may be reduced when the approach is narrow. If the approach is wide, some positions may have to be occupied with only one man.

#### Distance Between Rifle Teams

The distance between rifle teams is determined by a number of factors. These include--

- The mission of the platoon.
- Threat capabilities.
- The terrain.
- Visibility conditions.
- Strength of the rifle teams.
- Location of the rifle teams with respect to the BFVs.

#### Squad Leader Assignments

The platoon leader assigns sectors to the dismount element squad leaders. He explains to them how each fits into the defensive concept. He tells the squad leader where to place his SAWs (or M60's) and Dragon. He assigns sectors of fire for each weapon. Leaders must be cautious about organizing a defense that relies too much on the Dragon; it has a slow time of flight and is easy to suppress. Also, only a few rounds are carried. The dismount leader makes sure that the key weapons have mutual support. He also ensures that there are no gaps in the element's sector.

Mutual support is gained by overlapping sectors of observation and fire. This fire must be enough to stop the threat from penetrating the position. It also keeps him from isolating any part of the dismount force. A rifle team position and overlapping fires are shown in [Figure 20](#).



**FIGURE 20. RIFLE TEAM POSITIONS AND OVERLAPPING FIRES.**



Obstacles are planned and emplaced to aid in the fire support plan. The commander may provide engineer assets. These should be used to the fullest extent. They can emplace obstacles and or prepare positions.

As a rule, dismounted infantry is used in dug-in positions. These should have overhead cover. This will reduce the risk from indirect fire.

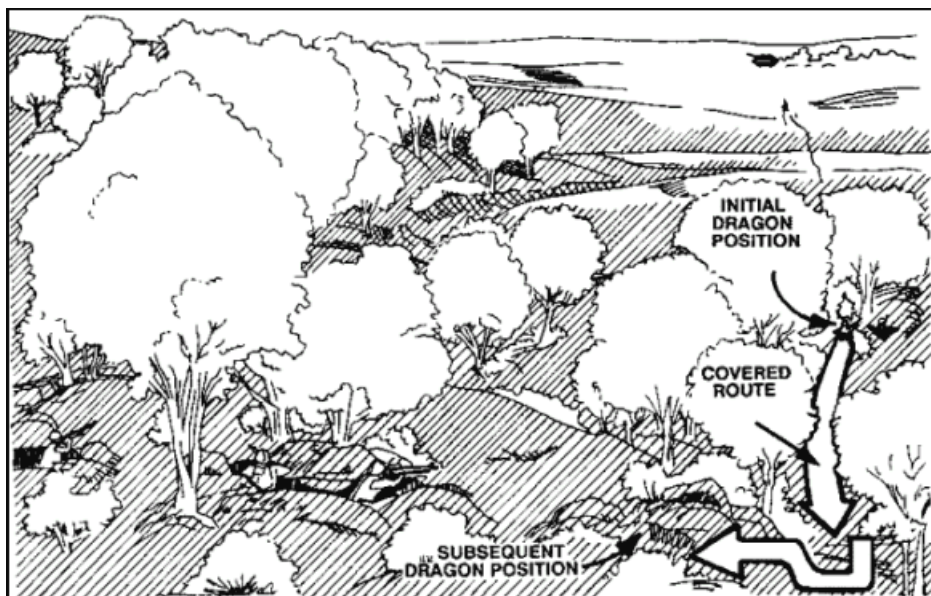
## Dragons

As was noted, rifle teams are most often used where mounted movement is restricted. This means that Dragon positions with good engagement ranges may not be available. In this case, the Dragons should be placed forward or on the flanks of the dismount element. This will give better fields of fire. Dragons should be placed to get flank shots, where possible.

Limited rounds for the Dragon are carried. Give thought to this situation when deploying it. Often, it should be considered for use with an armor-killer team. Other uses are forward with an OP, or to the flank. If there are no Dragon targets, or if all rounds have been used, the antiarmor specialists fire their M16A2 rifles. A good Dragon position should have--

- Observation to the maximum Dragon range.
- Cover and concealment.
- Clear fields of fire (to the flanks, if possible).
- Security.
- A backblast area.
- Concealed routes to subsequent positions.

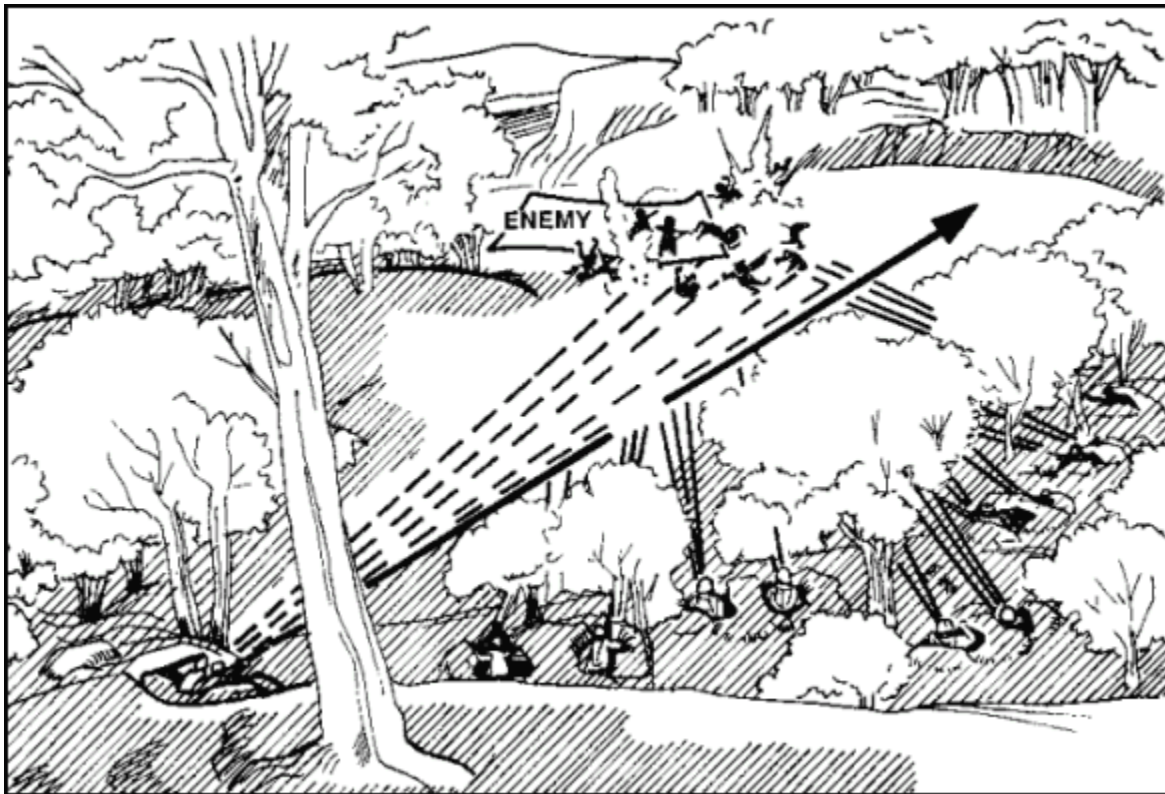
Following the initial position, the Dragon can move to a subsequent one. A covered route for this movement is shown in [Figure 21](#). The figure shows the Dragon in its initial position. This is forward of the rifle teams. The subsequent move is to their flank.



**FIGURE 21. DRAGON POSITIONING.**

## Machine Guns

Machine guns are the main weapon used by the dismount force to stop infantry attacks. As a rule, all of the platoon's machine guns are manned with the dismount element. They should be on tripods with traversing and elevating mechanisms. Machine guns are positioned to give sectors of fire across the dismount elements front. If possible, they should interlock with the BFV force and adjacent platoons. The positions should have frontal cover. Machine guns are best used to give enfilade fire down the line of the threat assault formation. Machine gun positioning is shown in [Figure 22](#).

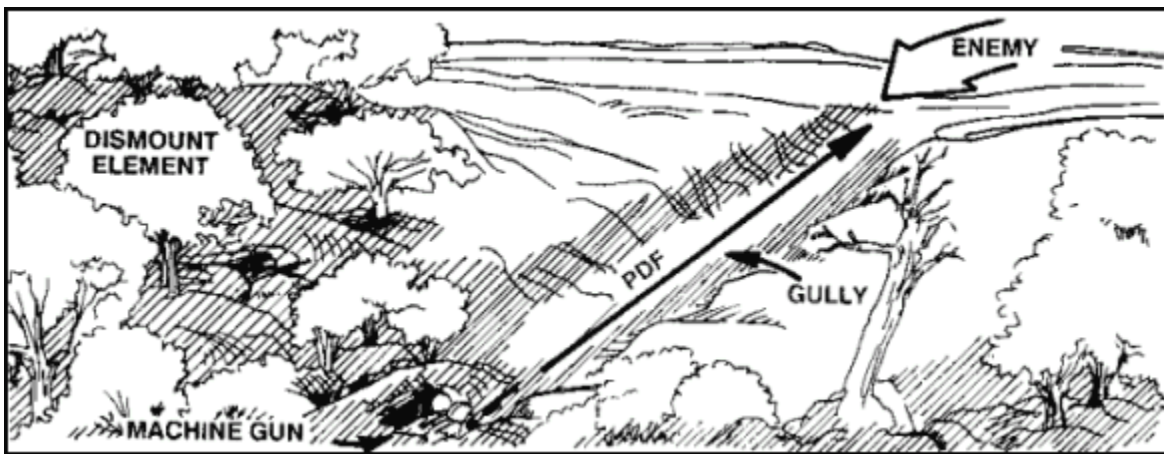


**FIGURE 22. MACHINE GUN POSITIONING.**

Machine guns are assigned a final protective line. As a rule, this is across the front of the battle position. It is the point where the platoon leader expects to stop the threat dismount force. This will be done with interlocking fire and obstacles. A machine gun FPL should give as much grazing fire as possible. Grazing fire is to be no more than one meter above the ground along the FPL.

Dead space is any space that grazing fire does not cover. It is found by having a man walk the FPL. The machine gunner eyes this man as he walks. He records any space his grazing fire will not cover. This dead space must be covered by fires from the grenadier's M203. Indirect fire, such as mortars, is also planned on the dead space. The FPLs should overlap. Then, the loss of a machine gun does not leave a gap.

At times, a gully or ditch will lead into the position. If so, the machine gun can be positioned to fire straight down the approach. Rather than an FPL, this machine gun is assigned a principal direction of fire. This is shown in [Figure 23](#).



**FIGURE 23. PRINCIPAL DIRECTION OF FIRE.**

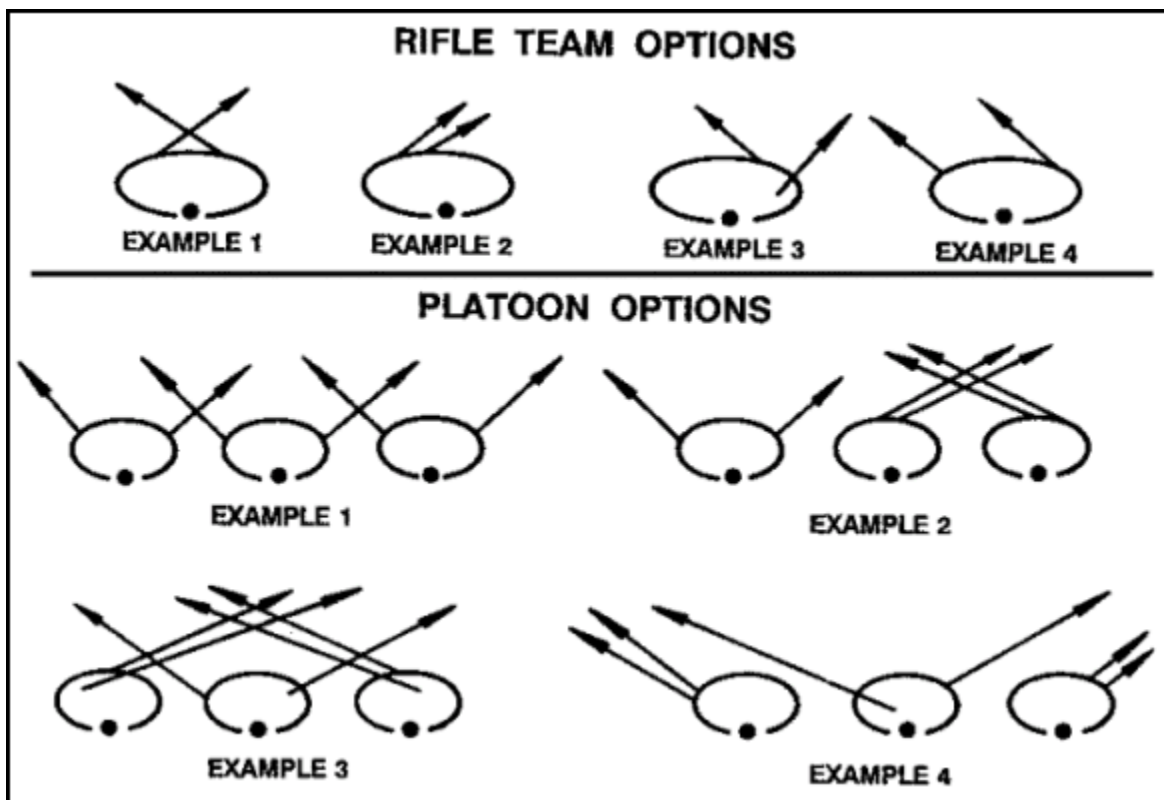
A machine gun is always laid on its FPL or PDF, unless engaging other targets. The FPL machine guns should be fired all at the same time and on signal.

M60. The M60 requires an assistant machine gunner. He should be assigned a sector that will do one or more of the following:

- Help secure the machine gun position.
- Cover gaps in machine gun fire.
- Overlap the machine gun sector.

If the threat mounted attack closes within 400 to 500 meters, the assistant acts. He directs his weapon fire at any exposed enemy track commanders. This would force them to close their hatches. Their control problems would then be greater.

SAW. The M249 SAW is to be issued to mechanized units. It will be used like the M60 in the defense. SAW employment options are shown in [Figure 24](#). The two automatic riflemen should cover the team's front, or tie in with a flank. They should be assigned sectors that overlap with other team's fires. This will give fire all through the platoon's sector. Dead space is covered with grenade fire from the M203.



**FIGURE 24. SAW EMPLOYMENT OPTIONS.**

The SAWs can be used on each flank. They may also be used in pairs on one flank or the other. When used singly on each flank, there are options. They can both shoot across the front of the rifle teams, or they can be used to tie in with one or both of the flanks. The platoon leader decides on the PDF.

**LAW.** This is the main close-in antiarmor weapon of the rifle team. Each rifle team should have several LAWs in its position. A soldier's sector of fire for the LAW is the same as for his main weapon.

**Claymores.** Threat approaches to the position should be covered with hasty mines. There may be dead space that cannot be hit with grenade launchers. Claymores and other antipersonnel mines can be used here. A Claymore must be fired by a soldier who can see its sector of fire. Claymores should be double-wired. This is so they can be fired either from the position they protect, or the adjacent position. If more than one Claymore covers the same sector, the squad leader should name a firing sequence. The Claymore has only 100 feet of wire. Care must be taken in setting it up. This ensures that soldiers in the adjacent position are not in its backblast. Hasty protective minefields must be reported to higher headquarters.

**Antitank Mines.** These are best used for close-in protection against mounted assaults. They should be placed on likely tank routes where they can be covered by LAW fire. At least one mine should be emplaced per two-man position. More may be used if the threat of armored attack is great. When mines are used, reports must be made and locations recorded. All antitank mines should be removed when leaving the position. At times, such as when a withdrawal is ordered, this cannot be done. A report that mines were left in place must then be made.

Each weapon is set up and prepared to fire in its assigned sector. The squad and platoon leaders check the observation and sector of fire for each position. They complete coordination between the rifle teams. The FPL or PDF for each M60 is checked by the M60 gunner. The squad leader then allocates the initial ammunition. He supervises the preparation of all positions for each weapon.

The squad leader must concentrate on control of the team's fires. He fires his own weapon only to name targets or where added firepower is needed.

The platoon leader and squad leaders must be in positions from which they can control their men. As a rule, the squad leader will be in his team's center two-man position. He should be able to see his whole team and their sector. He should also be able to see the dismount force leader. The platoon leader must look for a position where he can see the whole platoon sector. He must be able to see at least the most critical part of it. He should have visual contact with the BFVs whenever possible.

## CONCLUSION

This lesson covered the task priorities of the Bradley platoon in the defense. It also went over the fire planning considerations, together with fire distribution and control procedures. The lesson ended with a discussion of the tactics and techniques for conducting the defense. You will go to [lesson two](#) after taking the practice exercise which follows next.



# LESSON 1

## PRACTICE EXERCISE

**Instructions** This practice exercise is to check your understanding of [lesson one](#). All questions are multiple choice. Try to answer the questions without referring to the lesson material. When you have completed the questions, turn to the PE answer page and check your answers.

1. You are the platoon sergeant, acting as the platoon leader, of a BFV platoon brief the squad leaders on defensive operations. The platoon defends to hold terrain and
  - ☐ A. conduct counterattacks.
  - B. suppress the enemy antitank fire.
  - C. destroy the enemy.
  - D. support the attacking forces.
2. The platoon leader has requested final protective fire for his location. The platoon weapons that will fire the FPF are
  - A. only the mounted weapons.
  - B. the dismounted weapons.
  - C. Dragons and LAWs.
  - D. all weapons to fire.
3. You are the acting platoon leader occupying a defensive position. You have the FO make up the platoon sector sketch. This is a time-saving measure because
  - A. you are performing other defensive tasks that are more important.
  - B. the FO can start his fire planning.
  - C. the battalion FSO needs the fire plan as soon as possible.
  - D. the senior squad leader is helping with the defensive plan.
4. Your platoon is in a defensive position. The threat has crossed two phase lines and is approaching the FPF. Your platoon fires have failed to halt the threat assault. As the acting platoon leader
  - A. only the FO can request the FPF to be fired.
  - B. only the FSO can request the FPF to be fired.
  - C. you request the FPF by authority of the commander.
  - D. the leader of the overrun area can call for the FPF to be fired.

5. You are the platoon sergeant of a right flank platoon in a company team defensive position. After EENT, a platoon moves in on your right flank. Acting as platoon leader, you must coordinate with the adjacent platoons by exchanging information and
- A. walking the platoon perimeter to get the needed information to shift the platoon.
  - B. providing sector sketches with the needed information to adjust weapons for mutual support.
  - C. escorting the platoon leader over your perimeter so he can shift his platoon.
  - D. obstacles and OP overlays will not allow the platoon to place out its OPs.
6. Your platoon is fighting and is outnumbered. As the acting platoon leader, you instruct the BFV commanders not to engage disabled threat vehicles. These targets will be left for
- A. Dragon engagement.
  - B. LAW engagement.
  - C. M901 ITV engagement.
  - D. tank engagement.
7. A T-72 medium tank is approaching your defensive position. One BFV reports a clear front shot, another reports a flank shot on the same T-72. You as the platoon leader, choose (only three choices)
- A. the frontal shot because it is a clear shot.
  - B. the flank shot because there is a better chance to hit the target.
  - C. not to engage the target, but wait and see what follows.
8. In the defense, engagement priorities must be assigned. There are two types of targets that must be destroyed first. One target is that which carries the momentum of the attack. The other is
- A. the closest target.
  - B. the target with the greatest threat.
  - C. the target that is easy to kill.
  - D. the motorized target.

9. The squads have dismounted and moved into the defensive position. As the squad leader, you place the Dragons forward
- A. or on the flanks of the dismounted element.
  - B. with the mounted element to engage threat BMPs.
  - C. because of its long-range fire.
  - D. to engage deep targets.
10. 10. Certain missions require the BFVs to be forward of the dismounted element. As the platoon sergeant controlling the dismounted element, you instruct the element
- A. to improve positions and emplace obstacles.
  - B. to move into the BFV's position.
  - C. to be ready to remount the BFVs when they return.
  - D. to remain 50 percent on alert while the others sleep.
-



## LESSON 2

### CONDUCT A DISENGAGEMENT, DELAY, WITHDRAWAL AND LIMITED VISIBILITY OPERATION

Prepare and conduct limited visibility operations, employ the BFV in an air defense role and disengagement, delay, and withdrawal from a defensive position.

#### TASK:

Prepare and conduct limited visibility operations, employ the BFV in an air defense role, and disengagement, delay, and withdrawal from a defensive position.

#### CONDITIONS:

Given the subcourse material for this lesson, a combat (training) scenario and extracts, as applicable, the student will complete the practical exercise at the end of this lesson.

#### STANDARD:

The student will demonstrate his comprehension and knowledge by identifying the procedures to conduct defensive operations.

#### REFERENCE: [FM 7-7J](#)

In this lesson, you will learn the techniques used by the Bradley platoon to plan and conduct the defense in limited visibility. You will also learn the air defense role of the Bradley. The lesson will end with the techniques used in disengagement, delay, and withdrawal in the defense.

#### Learning Event 1: IDENTIFY TECHNIQUES USED BY THE BRADLEY PLATOON FOR PLANNING AND CONDUCTING DEFENSIVE OPERATIONS IN LIMITED VISIBILITY

This learning event will discuss the techniques used by the Bradley platoon to conduct the defense in limited visibility. These should not be thought of as "special" conditions. The use of smoke and obscurants is common on the modern battlefield. Bradley leaders will need to know how to operate under these conditions.

#### LIMITED VISIBILITY CONSIDERATIONS

Limited visibility conditions are many. Darkness limits how much we can see, as do fog and rain. Smoke and dust will also limit vision. Other obscurants may be used in battle as well. A number of devices are used to improve visibility; these are--

- Image intensifiers.
- Thermal sights.
- Binoculars.
- Artificial illumination.

Image intensifiers and thermal sights should be used together. The strengths of one can offset the weaknesses of the other. Some conditions degrade the effectiveness of night vision devices. These

conditions are heavy rain, snow, fog, smoke, and dust. Security measures must then be increased. More remote OPs can be set up. More patrols can also be used, as well as remote sensors.

## SECURITY MEASURES

The security measures outlined here are general. That is, they apply in any condition. They are of special concern in limited visibility.

### Noise and Light Discipline

The platoon must use noise and light discipline at night. If it does not, all other security efforts may be wasted.

Noise. Vehicle noises are the hardest to control. They are also those most likely to be heard by the threat. Vehicle noise may be cut down in several ways.

When it can be done, move as little as possible at night when the BFV's engine and tracks can be heard at a greater distance. Avoid fast idle speeds and fast movement. Where possible, close ramps and hatches before dark. If closing them after dark, do not slam them shut.

Vehicle. Light discipline includes--

- Using vision block covers during darkness.
- Using the driver's night vision viewer (AN/VVS-2).
- Using night vision goggles.
- Turning off all internal lights.
- Using red filters on all flashlights.

When it is dark and the BFV has been prepared, it should be checked. One man from each dismount team can do this. He inspects the squad's BFV from the outside for visible light. The BFV should emit none.

Dismount Teams. The dismount teams also use noise and light discipline. Loud noises must be avoided. These include loud talking, laughing, and metal-on-metal sounds. There should be no smoking or building fires. Use of flashlights must be controlled.

### Physical Security

The threat must not be allowed to close on, or infiltrate, friendly positions without being detected. The platoon and squad must take actions to prevent this. This is physical security. The actions include--

- Manning observation posts.
- Conducting patrols.
- Conducting stand-to.
- Silent watch.
- Providing local security.

Observation Post. As a rule, the platoon will set up at least one two-man OP. The platoon leader will designate a squad to perform OP duties. An OP is designed in the defense to observe to the front; it may

also observe in the gaps between friendly positions. It gives early warning of the threat's advance. Wire is the main means of communication between the platoon and the OP.

A whole squad, including the BFV crew, may be given an OP mission. This gives the OP more firepower. It also gives armor protection and mobility. When this is not feasible, the rifle team will man the OP.

When the platoon leader mans an OP, he must explain in detail what he wants the men to do. He must tell them what actions to take when they detect the threat. They should be told when and how to return to the platoon's position. The platoon leader may want to have the FO and radiotelephone operator go to the OP. They can then call for indirect fire on any threat they detect.

Patrols. As a rule, these cover unoccupied gaps between positions. At times, patrols may also cover the terrain between OPs to the front. Squad rifle teams man the patrols.

Stand-to. These are conducted according to the unit SOP. A stand-to is a time of maximum preparedness. It occurs at first light and at darkness. The stand-to assures that the platoon is ready for action. It also assures that each man adjusts to the change in light. A stand-to is done 30 minutes before and after beginning morning nautical twilight (BMNT). One is also done at end evening nautical twilight (EENT). These are the minimum stand-to times.

The SOP should set out the actions to be taken. As a minimum, they should include--

- All troops are awake, dressed, and ready for combat.
- All vehicles are topped off with fuel and stocked with the basic load of ammunition.
- All weapons have been cleaned, serviced, assembled, and are ready for action. All radios are turned on and tested (briefly).
- All vehicles are ready for short-notice moves. They are loaded to the extent possible.

Silent Watch. Observation of assigned sectors must be kept up. It must not expose a friendly force to the threat's view. This is crucial in limited visibility, and in lulls in the battle. Silent watch may be used to do this. It holds to a minimum all sounds that might be heard by the threat.

A key factor in the use of silent watch is power drain. The BFV engine must be shut off, so only battery power is used. The platoon leader must use care to plan for this. The vehicle must be able to start if the threat attacks. The power system has a battery indicator. This must be watched with care.

Battery use without recharge varies. It depends on the age and condition of the batteries. Temperature and other factors also have an effect. The time may be extended by--

- Elevating the TOW launcher and raising the ramp before turning the engine off.
- Manually traversing the turret. Raising or lowering the 25-mm gun or 7.62-mm coax the same way.
- Using radio listening silence. (Use wire when time permits.)
- Using interior lights as little as possible.

The platoon leader can extend time without restart. He does this with a silent watch plan. He chooses which BFVs will observe and for how long. At times, the whole platoon sector can be observed by each BFV. Then, one BFV at a time can be used. This extends the watch time to the maximum. At other

times, two BFVs are needed to cover the sector. They can then be used in pairs, and rotated. In time, all BFVs will need to recharge their batteries. The platoon leader should direct this. All the BFVs should start their engines at the same time, and run them at fast idle.

NOTE    The thermal imagery sight of the integrated sight unit must be considered. It  
:        needs about 10 minutes to cool down enough to be fully effective. If attack is  
         imminent, all sights should be ON. This drains power. It limits silent watch times.  
         When rotated, watches should overlap by 10 minutes. This gives time for the new  
         team's sight to cool.

## Local Security

This consists of mounted and dismounted security.

Mounted Security. This is observing from the vehicle. The BFV is also prepared so that it does not become a security hazard.

The platoon leader should assign each squad an area to watch over. The Bradley commander and gunner can best do this. They are elevated in the turret and have access to the weapon's sights. In daylight, the optical sights and binoculars are used.

In the evening stand-to, these steps should be taken:

- Maintain noise and light discipline.
- Be fully sure the 25-mm gun and 7.62-mm coax ammunition boxes are fully loaded.
- Activate and test the turret drive and turret stabilization.
- Run the BFVs engine enough to be sure the batteries are charged. Then, all BFVs will be ready to assume silent watch.

Dismounted Security. This is provided by the rifle teams. In daylight, they observe in their assigned sectors of defensive fires. At night, positions may be moved forward, or they may move closer to the BFVs or the tanks in the company team.

The rifle teams observe with the naked eye, binoculars, and their nightsights. They also listen for the threat. It is hard for vehicle crews to listen. This is because they are closed in the vehicle and subject to its noise.

## OTHER LIMITED VISIBILITY CONSIDERATIONS

Limited visibility can give platoons and squads some concealment. They should make the fullest use of this. To do this, they must deal with several factors.

### Night Factors

At night, objects may look distorted. Ranges can be hard to estimate. Dark objects seem to be more distant than light ones. These things can be compensated for. Use either the scanning or off-center viewing techniques. On a clear night, the naked eye can pick out land relief and colors up to 400 meters. With a full moon, the naked eye can spot a moving man at about 240 meters. With binoculars,

this is increased to 700 meters. Other factors limit observation even more. These factors are haze, smoke, dust, and fog.

### Physical and Psychological Factors

Darkness may stimulate the imagination. This can burden the nervous system. It can create a sense of insecurity that can lead to panic. The eyes and ears are more sensitive at night. Soldiers using STANO devices should be given a chance to rest at least every 30 minutes. They should be rotated every 1 1/2 to 2 hours. This avoids eye fatigue. Sleep plans must be set up and enforced. If not, the soldiers' fighting ability can degrade.

### POSITIONS

The platoon leader must use the time when visibility is good to prepare for when it will be limited. He designates positions for vehicles and crew-served weapons ahead of time. The positions in good visibility should be such that they need not be moved. The distance of the move should be kept short. Routes to and from positions should be named ahead of time. The thermal sights of the Dragon are limited in firing through smoke and haze.

In limited visibility, the platoon leader may have to reposition rifle teams and BFVs. They may need to be closer to the designated engagement areas. They may need to use alternate engagement areas. The assigned engagement areas may be beyond the range of observation. Another reason to reposition is to cover gaps between units. It may also be necessary to cover alternate avenues of approach. These can be created by the reduced ranges of the weapons systems.

Any repositioning of forces should take place soon after limited visibility begins. Moves are along routes that were reconnoitered ahead of time. They lead into positions that were also named ahead of time.

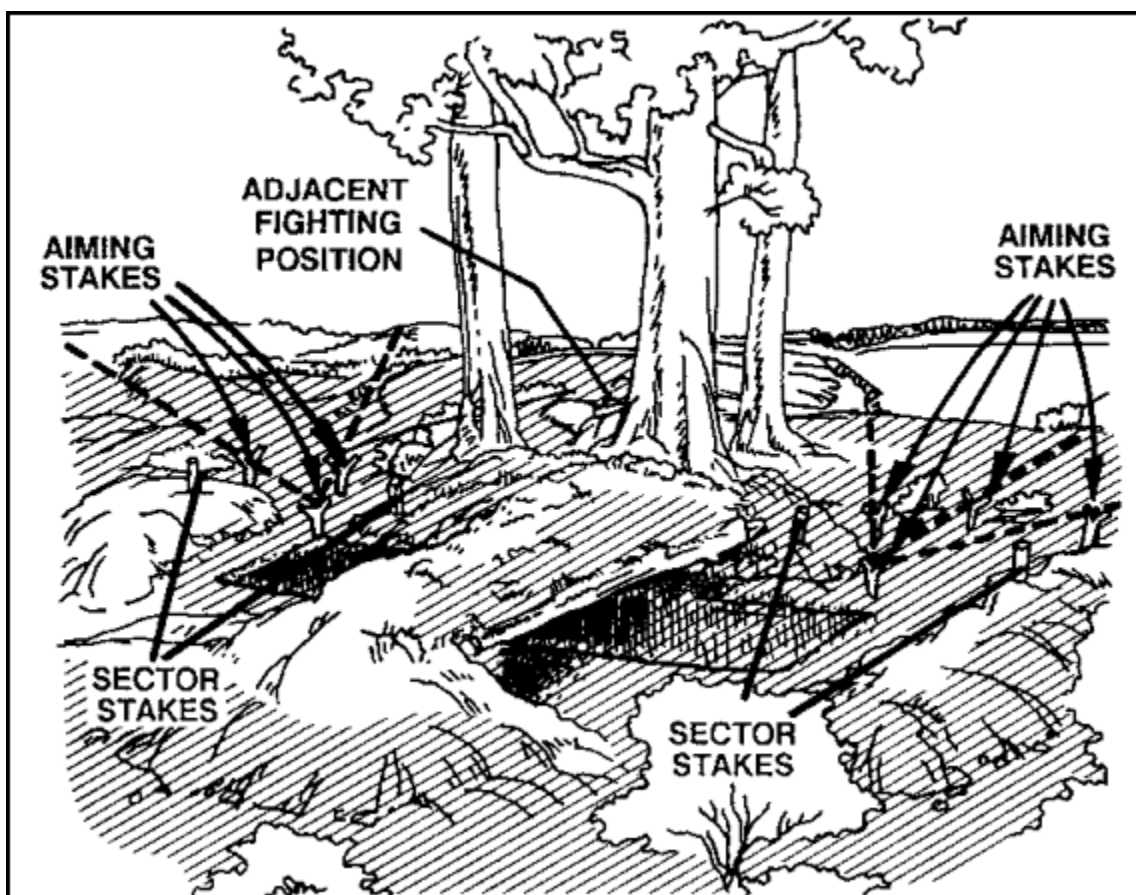
### COMMAND AND CONTROL

Command and control at the platoon level means the control and synchronization of the BFV and dismount forces. As a rule, the platoon leader locates with the maneuver element. If one is used, it will most likely be the mounted element. The platoon sergeant will then locate with the dismount force.

### Fire Control Aids

In the defense, command and control are vital. Limited visibility makes them hard to achieve and maintain. Good command and control begins in the fighting positions. Each of these must have aids to control fires. These aids are the sector and aiming stakes. They are shown in [Figure 25](#).

- Aiming stakes. These are used to aid the soldier in firing his weapon on dangerous avenues of approach.
- Sector stakes. These are used on the right and left to define the sector of fire. They also prevent firing into adjacent positions by accident.



**FIGURE 25. AIMING AND SECTOR STAKES.**

#### Range Cards and Sector Sketches

These are integrated to coordinate control. The 25-mm gun and TOW have the most need for target reference points. It is hard for them to estimate distances at long range. TRPs should be chosen out to the limit of the weapon's range. This can be done by careful map study. It can also be done by pacing or driving the distance. Tanks may be available; their laser range finders can be used to mark or verify TRPs.

#### Other Control Measures

The platoon leader may use other control measures. Tracers can be used to identify point or area targets. Pyrotechnics may also be used. They indicate lifting, shifting, or concentrating of fires.

#### COORDINATION

The platoon leader must coordinate with adjacent platoons. He must coordinate--

- Sectors of fire for night firing of weapons systems.
- Repositioning of forces in limited visibility.
- Security measures to secure the front and flanks.

The platoon leader must position his STANO equipment and night vision devices. They should have overlapping fields of observation in the platoon's sector of fire.

## Integrated Sight Unit (ISU)

This must be manned and used to the fullest extent. A surveillance plan must be set up. This assures that sectors of observation overlap. Use of the ISU requires that the Bradley engine be started. This must be done about every two hours to charge the batteries. All Bradleys should be started at the same time. This keeps the threat from knowing how many are on the position.

## OCCUPYING A DEFENSIVE POSITION

As a rule, the techniques used in good visibility also apply in limited visibility. When possible, the BFVs and dismount force should be on the same position. This is to simplify command and control. The position should first be reconnoitered. Stealth should be used at all times. Light and noise discipline must be enforced.

### Reconnaissance

There are a number of actions that the platoon leader must take during the reconnaissance. He must--

- Ensure that no threat forces are in the position to be occupied.
- Identify threat avenues of approach (mounted and dismounted).
- Identify likely threat overwatch positions.
- Choose engagement areas, if they are not assigned by the company commander.
- Choose primary, alternate, and supplementary positions for the BFVs and rifle teams.
- Identify dead space to the front, and set up a plan to cover it.
- Choose locations for OPs and the command post.
- Confirm locations of adjacent platoons and companies.
- Choose target reference points, sectors of fire, and other control measures.
- Choose routes into and out of positions.

A reconnaissance in limited visibility must do the same as above. The platoon leader must use great care in this. The STANO device he uses should have roughly the same capabilities as his weapons systems.

When time permits, the platoon leader should go forward and carry out the reconnaissance. He then goes back to the platoon position and brings the squad leaders forward in his BFV. He should then assign the--

- Rifle team and BFV positions.
- Sectors of fire.
- TRPs.
- Engagement areas.

The squad leaders should then go back to the platoon position. They issue orders to occupy and prepare the forward positions. The platoon then moves forward.

In some cases, there will not be enough time for the tasks listed above. The platoon leader may require to take his squad leaders forward for the initial reconnaissance, or he may bring the whole platoon forward to an assembly area. This should be near the defensive position. He then does the reconnaissance with his squad leaders.

As the platoon members occupy the positions, they perform the work priorities.

The platoon leader must decide how to fight his forces. He must look closely at whether to fight both the BFVS and dismount force from the same or different positions. In limited visibility, fire control is simpler if both are in the same position. The positions are also easier to occupy.

## CONCLUSION

The defense will often have to be done in limited visibility. The platoon leader must know the needs under these conditions. He must consider how it affects his men and equipment, and he must be able to take the steps needed to compensate for it. The Bradley platoon is better equipped for this condition than any of its kind. The platoon leader must make full use of this advantage.

## Learning Event 2: IDENTIFY TECHNIQUES USED BY THE BRADLEY PLATOON FOR PLANNING AND CONDUCTING AIR DEFENSE OPERATIONS

In this learning event, you will learn the nature of the threat air attack and their tactics. You will see what measures to take to avoid air attack. Then, you will learn how to engage threat air targets.

## GENERAL

Threat air forces will be able to control part of the battlefield airspace. The Bradley platoon must be able to defend against air attack. This is done by making full use of--

- Cover and concealment.
- Camouflage.
- Dispersion.
- Early warning.

The best way to avoid an air attack is to conceal. Platoons must also be able to use their weapons well in air defense. Threat aircraft can attack any ground force whose location has been discovered. Sighting a few soldiers or vehicles can expose a whole unit.

Attacks will be swift and unexpected. Early warning of a probable attack is needed. This gives troops a chance to take cover. This warning may come down through normal command channels, or it may start with Bradley commander, air guards, or local OPS. All Bradley commanders and OPs should have airwatch instructions.

## THREAT TACTICS OF JET AIRCRAFT

Threat jets work in two teams of two aircraft each. They use high speed for surprise and survival. As a rule, they strike along the long axis of a target. This gives them a better chance for hits. They try to attack out of the sun to gain surprise. Threat jet aircraft weapons include--

- Automatic guns.
- Rockets.
- Bombs.
- Cluster bomb units.



With guns and rockets, they can fire from a distance. They must fly over or near a target to use conventional bombs. They will make two runs over a target. Bombs are dropped on the first run. Rockets and cannons are used on the second.

A common threat tactic is to attack with one team. The second team follows 1 to 3 miles behind. The teams try to surprise the target, and divert attention and defensive fire. When the lead team spots a target, it tells the trailing team. Then, the lead team pops up in full view of the target. This draws fire to the lead team.

The trailing team has not yet been seen. It flies in at high speed for a low altitude attack. The attack is, as a rule, level and under 1,000 feet. Cluster bombs are dropped along the target's axis. The lead team then makes a sharp reverse turn. They attack the target close-in. Guns and rockets are fired, or dive-bombing is done.

The target may be surprised by the lead team and fail to take evasive action. The trailing team will then get the maximum effect with cluster bombs, or the target may only evade the first attack and fail to concentrate fire on the lead team. This team will then get maximum effect with rockets and bombs on the return pass.

The best defense against attacking jet aircraft is--

- To know the threat air tactics, and do not be surprised by the trailing jet team.
- To immediately mass volume fire on any attacking jet. At the same time, disperse and evade.
- Make the fullest use of all small arms to fire at the target.

#### THREAT TACTICS OF ATTACK HELICOPTERS

Threat forces have some of the most heavily armed helicopters in the world. Attack helicopters fight in teams of two or more. They are more agile and maneuver better than jet aircraft. They can use ground cover and concealment while they engage from from standoff positions. A number of weapons can be used in support of this action.

- 57-mm free-flight aerial rockets.
- Antitank guided missiles.
- General purpose bombs.
- 12.7-mm machine guns.

Attack helicopters will be used a great deal in forward areas to give close air support. This is aerial fire support for the attacking forces. (It is like the A-10 support for US forces.) Attack helicopters will also be used for combat air assault in friendly rear areas.

The attack helicopters will be used for antitank fires. These are ATGM fires, such as the AT-2 Swatter or the more advanced AT-6 spiral. They will provide air-to-air interdiction. This is done as a secondary mission, along with one of the other combat roles. After they fire the ATGMs, attack helicopters will sideslip. This gives a quick drop in altitude. They then withdraw out of sight.

The best defense against threat helicopter is--

- To immediately concentrate volume fire on any attacking helicopter within range.

- To take evasive action and disperse.
- To create a smoke screen between the BFV and the attackers to counter their weapons (mainly the ATGM).

## TARGET ACQUISITION AND ENGAGEMENT

### Air Guards

While mounted, the Bradley commander should act as an air guard. He has the best position in the BFV to do this. However, he is also required to spot ground targets. His field of view is not toward the sky at all times. Other members of the crew must aid in air guard duties. This may be done by opening the cargo hatch and placing one or two men in it. The field of view from the cargo hatch is limited, but it does not give a view to the flanks or rear of the BFV.

### Where to Look

A map reconnaissance should be done. This should cover the direction of movement or area of operations. It helps to pinpoint likely areas from which an air attack could be made.

Possible attack helicopter positions are--

- Back of wood lines.
- Ridgelines.
- Folds in the terrain.

These should be marked out to at least 3,000 meters. Other areas must also be approached with caution. These are restrictive terrain, defiles, and narrow valleys. The platoon may have to close in at these places. Moving close together, BFVs make a very good target. Air attack can be made along the long axis of movement.

### How to Look

Attacking aircraft must be seen soon enough for the platoon to react. Air Guards must keep up a constant alert for hostile aircraft. One technique is used for flat terrain, another for hilly. In both, the watcher should focus on a distant object often. This may be a cloud, or a terrain feature. If this is not done, the eyes tend to relax. Distant objects then become blurred.

In flat terrain, in daylight, the guard should search the horizon. Use short eye movements, from object to object. More detail registers this way.

In hilly terrain, in daylight, the guards use the horizon as a starting point. Prominent features are used as points of reference.

Searching for air targets at night is much like searching for ground targets. Techniques include short, jerky abrupt movements of the eyes. Off-center vision is also used. In this, the watcher looks slightly to the side of an object. This prevents an image from fading. To aid night vision, cup the hands around the eyes. This shields out distracting light.

### What to Look For

The searchers should be alert for--

- Sun reflection from aircraft canopies or cockpit windows.
- Blade flash from rotating helicopter blades.
- Smoke or vapor trails from jet aircraft, missiles, or rockets.
- Dust or excessive movement of treetops and bushes. This may be caused by downwash from helicopter blades.

Searchers should also listen for noises. They may hear helicopter blades, or jets breaking the sound barrier. Nightsights or binoculars can be used. They help pick out distant targets not seen with the naked eye.

### When to Engage

Rules to engage aircraft should be in the unit SOP. These rules are based on policies of higher headquarters. When there is no SOP guidance, the following is suggested:

- Immediately engage all attacking aircraft.
- Engage threat aircraft not attacking your position only when told to do so. Do not be arbitrary in making attacks. To do so may compromise your position.
- The best defense may be passive measures. These are camouflage, cover, and concealment.

### How to Suppress

Likely areas for the threat to hide should be suppressed. Such places are behind hills and treelines. Suppression can be achieved as for ground targets, with indirect fire. Mortars, artillery, and the BFV's weapons are used for this.

### AIRCRAFT ENGAGEMENT

Aircraft are engaged for a number of reasons. These are--

- To destroy the aircraft, if possible.
- To force the aircraft away from friendly positions.
- Force the aircraft to fly higher. It can then be destroyed by friendly forces.
- Spoil the aircraft's aim while it engages friendly forces.

Vehicles must take evasive action when attacked or when engaging. The effect of the hostile aircraft's fire is then less. Evasive actions should include--

- Seeking cover and concealment.
- Keeping vehicles dispersed.
- Moving with frequent changes of speed and direction. This is done while turning away from the hostile aircraft's axis of attack.
- Avoiding the use of lights at night.

### BFV WEAPON'S CAPABILITIES AND LIMITATIONS

The 25-mm gun and 7.62-mm coax can elevate to +60 degrees. The 25-mm gun has three rates of fire. These are single shot, 100 and 200 rounds per minute. In air defense, the 200 round per minute rate is used. Bursts of 25 round of HEI-T are fired (unless the target is a Hind). This gives a rapid rate of fire, and does not use too much ammunition. If the target is a Hind, APDS should be used.

The 7.62-mm coax has a cyclic rate of fire of 650 to 950 rounds per minute. The maximum effective range is 900 meters. A jet aircraft flies a crossing course at high speed. The 7.62-mm should be used to engage it, rather than the 25-mm gun. Helicopters may also fly a crossing course at high speed. They are also then engaged with the 7.62-mm coax. The ready load for the 7.62-mm coax is 800 rounds. An added 1,540 rounds is stored. The 7.62-mm coax is used for several reasons. It gives a greater cyclic rate of fire. The stowed load of ammunition is larger. Reload time is faster than for the 25-mm gun.

The BFV has a ring sight, mounted on the outside of the turret. It is in front of the Bradley commander's hatch. The ring sight is used when firing the 25-mm gun (HEI-T), or the 7.62-mm coax at slow-moving aircraft. The rear sight is made up of the pointer post and aperture ring. The front ring sight is marked with sighting crosshairs and three speed rings. Each of the speed rings is spaced for a target lead of 50 miles per hour. An estimate of the aircraft's speed is needed. The lead to hit the target can then be computed. The rear aperture sight has an aperture ring and a pointer post. If APDS is used on the Hind, less lead is needed. This round has a flatter, faster trajectory.

The front sight crosshairs are aligned ahead of and in line with the aircraft's line of flight. The Bradley commander looks through the rear sight. He leads one ring for each 50 miles per hour of target speed.

NOTE The pointer post should be put on the target. The target is engaged with the 7.62-mm coax. A continuous burst is fired at the lead point.

## ENGAGING FAST-MOVING AIRCRAFT

Jet aircraft are best engaged with a continuous burst from the 7.62-mm coax. This is because of their speed. When the target is flying a crossing course, a lead of 200 meters is used. This is the length of two football fields. Fire is directed ahead of the aircraft. The aircraft then flies through the machine gun's cone of fire. Do not try to track or traverse with the aircraft. It flies too fast for this. The dismount force also fires on the aircraft. They use the same 200-meter lead for jets. For helicopters, a 50-meter lead is used. This is half a football field. If the aircraft is flying directly toward the BFV, fire is aimed slightly above the aircraft nose. This is true for any type of aircraft.

A second technique can be used on high-speed aircraft. Choose a reference point, or a series of them. The platoon leader alerts the platoon to get ready. As the aircraft nears a reference point, he gives an order. "ENEMY AIR, REFERENCE POINT TWO--FIRE." All weapons are raised to a 45-degree angle over the reference point and fired.

## ENGAGING HOVERING HELICOPTER

This type of target is engaged with 25-mm gun. The gunner's integrated sight unit is used. Range to the target is estimated. The stadia lines in the sight reticle are used to do this. A quick check of the map is done for the target's location and range. Reference points of known range are used, or the range can be estimated by sight. Rounds are adjusted until they hit the target. The Hind is about the same height as a BMP. The integrated sight unit is more accurate than the ring sight. The 25-mm gun has greater effect than the 7.62-mm coax. A 200 round per minute rate of fire is used. Bursts of 25 rounds of HEI-T are fired. APDS is used for Hinds. The aim point is slightly above the fuselage. At longer ranges, tracers may look as if they are striking the target when they are really going over it.

## ENGAGING THREAT AIRBORNE/AIR ASSAULT FORCES

These troops will be used often in the attack. They may be dropped from helicopters or transport aircraft. At times, no landing sites are available. They may then rappel from their helicopters. Troops carrying helicopters should be engaged as soon as they are sighted. If rappelling troops are sighted, engage the helicopter. It is a better target than the troops.

It is harder to engage airborne soldiers. They are dropped from fast-moving aircraft at high altitudes. They fall too fast to track effectively. When using the 7.62-mm coax or the M60, a lead must be taken. This is to compensate for the rate of fall. Use a lead of two man heights beneath the dropping soldier.

Pilots who have bailed out of disabled aircraft are not airborne troops. To engage them violates the covenants of the Geneva Convention.

## CONCLUSION

Platoons must be alert for hostile aircraft, as well as for ground targets. These can be destroyed or suppressed by the BFV's weapons. All weapons, including small arms, are used.

US troops must know the threat's air tactics. Rules for engaging aircraft should be part of the SOP. When attacked, the platoon must take evasive action and engage the aircraft. Airborne and air assault troops are also aerial targets and are engaged.

## Learning Event 3: IDENTIFY TECHNIQUES USED BY THE BRADLEY PLATOON FOR PLANNING AND CONDUCTING DISENGAGEMENT OPERATIONS FROM A DEFENSIVE POSITION

As the threat closes, the company or company team commander will decide how long to hold defensive positions. He bases this on orders from the task force commander. The company or company team may be required to disengage and displace to subsequent positions. A platoon defends a part of a company or company team. It may break contact with the threat--

- To defend from another battle position.
- Prepare for a counterattack.
- Delay.
- Withdraw.
- Prepare for some other mission.

In this learning event, you will learn how to plan and conduct the disengagement.

## FIRE AND MOVEMENT

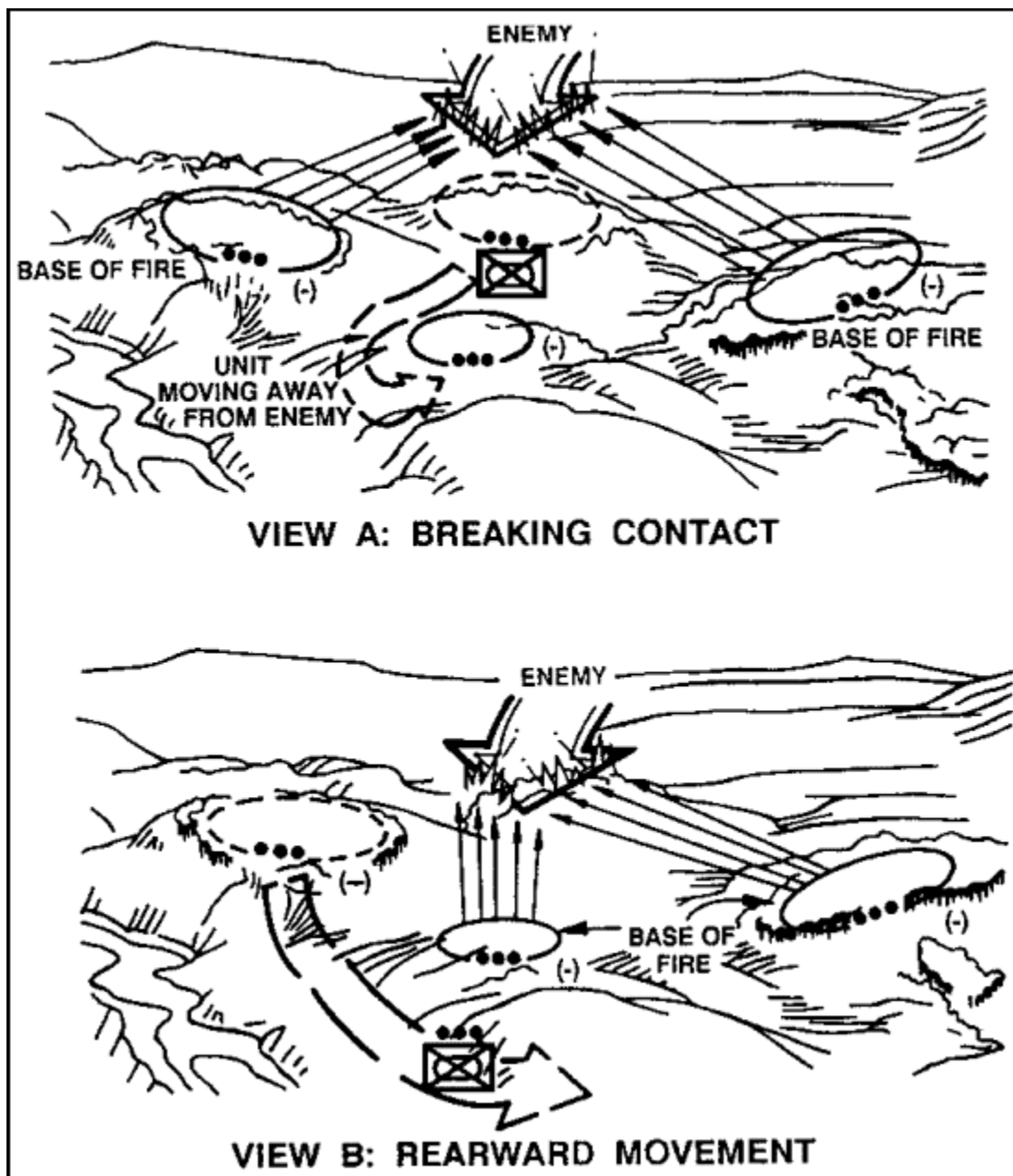
Fire and movement to the rear is the basic tactical for disengaging. All available fires are used to stop the enemy and allow platoons to move away from the enemy. The company or company team commander may move his platoon and mass fires to stop or slow the enemy advance before beginning the movement away from the enemy. A heavy volume of antiarmor fire will force the enemy to dismount his infantry and thus slow his mounted advance. Artillery and mortar HE fire and smoke will also add to the enemy's confusion, slow the momentum of his mounted attack, and help to conceal the

movement of friendly units. Small arms and indirect fire can be used against an attack by dismounted troops.

#### Breaking Contact and Rearward Movement.

These actions are shown in [Figure 26](#). A base of fire is formed to cover other units moving away from the threat. One unit acts as the base of fire. They hold the threat off. This is done with fire, or by holding terrain that blocks his advance. The other units then move to break contact.

When the moving unit gets to the next position, it provides the base of fire. This covers the rearward movement of the forward unit.



**FIGURE 26. BREAKING CONTACT AND REARWARD MOVEMENT**

Fire and movement is repeated until--

- Contact is broken.
- The units pass through a higher level base-of-fire force.
- The units are in the next position to resume their defense.

### Mounted Attack

Against a mounted attack, antiarmor weapons are used as the base of fire. For this reason, movement of those weapons must be closely controlled. Normally, improved TOW vehicles move back first. These are followed by BFVs, then tanks.

### Dismounted Attack

This attack may be faced in restrictive terrain, or visibility may be limited. The ITVs and tanks may then have to move first. The BFVs and rifle teams will cover them.

### Tactics

The tactics used to disengage may vary. This depends on how the platoon is deployed, and the plan of the larger force. Other factors may also enter. However, some actions will apply in all cases.

- The BFV's firepower is used to the fullest to cover rearward movement.
- BFVs should back out of a position and move. They try to keep a terrain feature between the BFV and the threat.
- Turret weapons stay pointed in the direction of the threat. Firing port weapons are manned and ready to fire. The rear ports are most important. This is crucial when the squad is at reduced strength.
- Rapid movement is one key to success; the other one is an effective base of fire.

### PLANS FOR A DISENGAGEMENT

These may be a part of any defensive plan. At times, rifle teams are deployed. Plans must be made for rapid remount. There are two ways to simplify this. One is to keep the teams mounted. The other is to keep them with the BFVs.

At times, the BFVs and rifle teams fight apart. Then, remount points and routes to them must be rehearsed. The platoon remount point can be--

- Near the dismount element position.
- Near the BFV position.
- Between the two.

Within the remount point, covered positions should be chosen. These should allow for easy remount, even in limited visibility. Squad leaders must make sure their men know where the remount points are, and the routes to them.

They must also know where the squad BFV is at that point. Routes to the remount point should be covered. They should allow speedy movement for both elements. To be considered in planning are--

- BFVs are faster and more protected than dismount troops.

- BFVs often shift from one firing position to another. Each must have a route to the remount point.
- Routes should be marked. They should be reconnoitered by all leaders and drivers.

## HOW THE DISMOUNT ELEMENT DISENGAGES

Without the BFVs, there are three ways for the dismount force to disengage. Simultaneous disengagement can be used when covered by fire. All teams move at the same time. When the element must cover its own movement, it can use two methods. One is by team, and the other is by thinning the lines.

### Simultaneous Disengagement

In this method, the teams assemble and move as one force. They go as fast as possible to the remount point, using movement techniques.

This method is favored when speed is crucial. The disengagement element must be covered by overwatching fires. The threat has not closed on the dismount force; or, they cannot effectively fire at it; there may be obstacles that slow the threat. In short, this method can be used when the threat cannot close off the position. It can also be used when other elements can provide good cover.

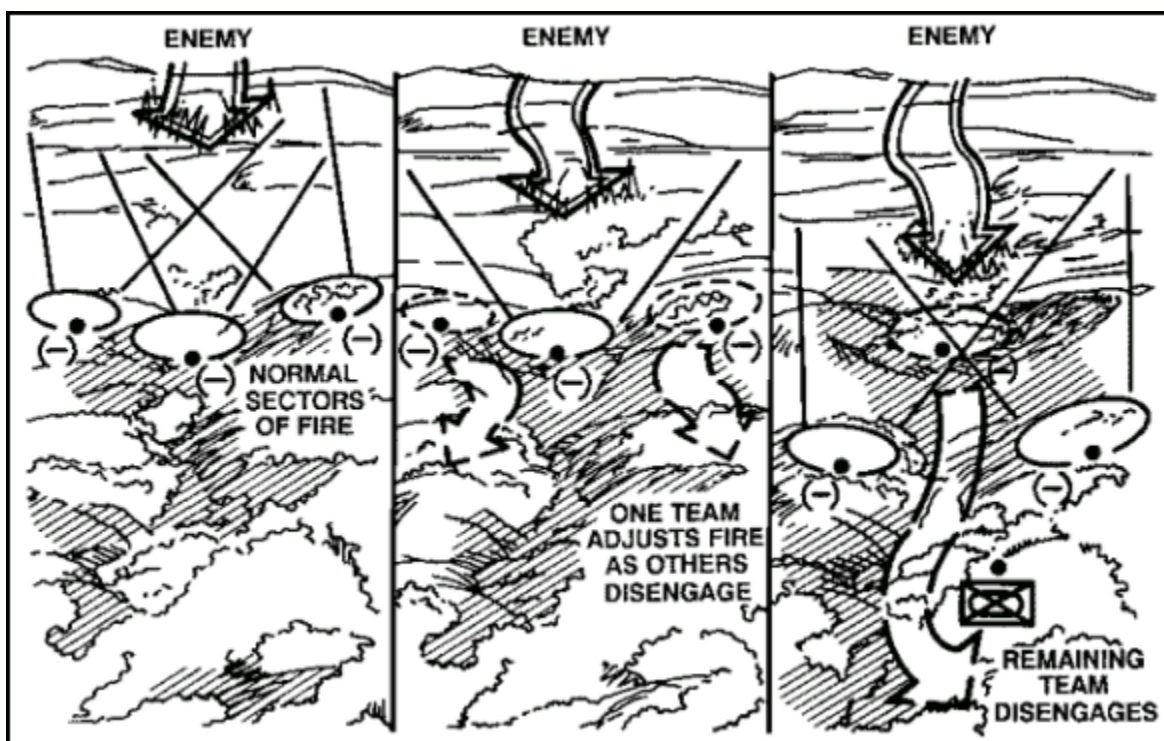
### Disengagement by Rifle Teams

This is used when the dismount force must cover its own movement. One or two teams stay in the position as a base of fire. The rest of the force move to the rear. Teams left to cover must fire into the element's whole sector. This covers the movement of the others. Sectors of fire are adjusted as needed. This gives better coverage of the sector.

The teams left in position disengage when the rest of the force is in a position to cover them. Movement to the rear by alternate teams continues until contact is broken. Once contact is broken, the disengagement is complete. The dismount force then moves to the remount point.

This method has the advantage of being simple. The rifle teams stay together. It is used when one or two teams can give good cover for the whole sector. Disengagement by rifle teams is shown in [Figure 27](#), below.





**FIGURE 27. DISENGAGEMENT BY RIFLE TEAMS.**

The first frame of the figure shows three rifle teams. Each is covering a sector of fire. The three sectors of fire overlap, and cover the whole sector. In the second frame, the two flank teams disengage. The one team that remains has to adjust fire. They now cover the same area that was covered by all three. Note that the threat is closing. In each frame, he is nearer. By the third frame, he has reached the position, but the team that was there has already moved to the rear. Cover was given by the other two teams.

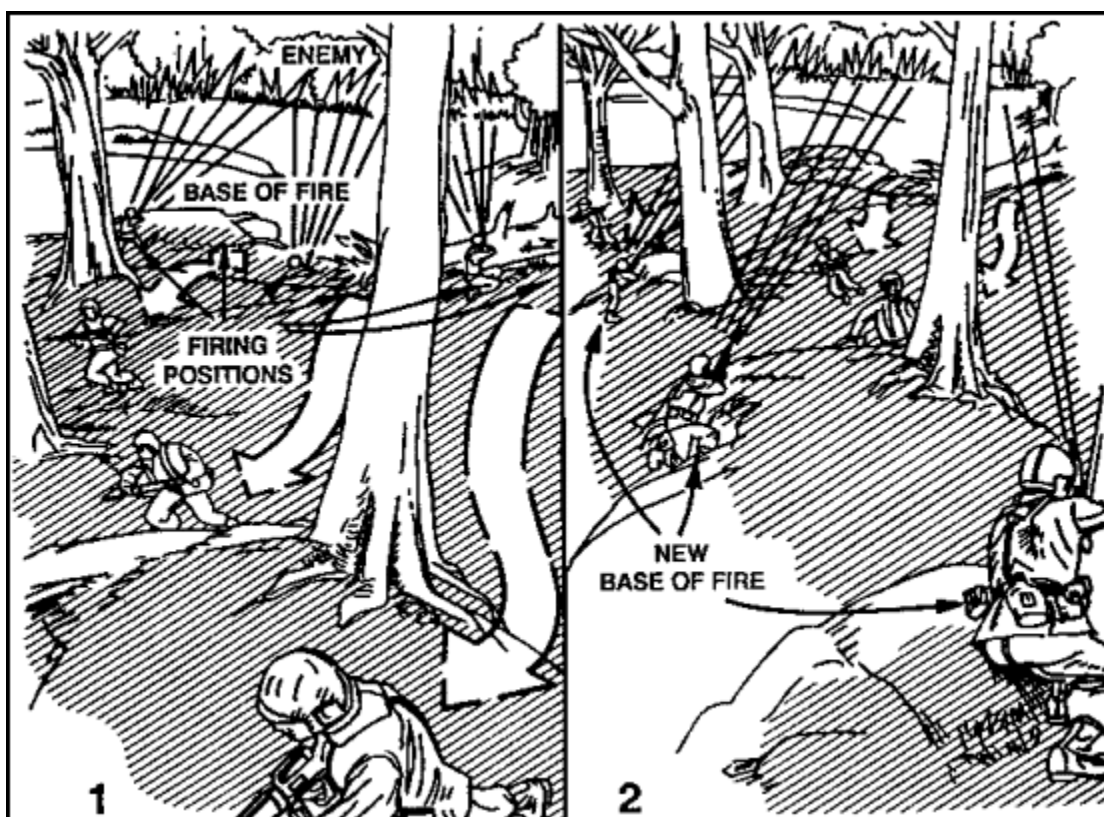
#### Disengagement by Thinning the Lines

In this method, men are chosen from each rifle team. Often, one man from each fighting position is chosen. These men disengage and move to the rear. The men still in position become the base of fire. They cover the movement.

When the rearward moving men are in position, they provide the base of fire. The rest of the force then moves to the rear.

The Dragon has a 65-meter minimum arming range. Normally, it is wise to move the Dragon first. The platoon and squad leaders move last. As one group disengages, the men who stay in the position increase their rate of fires. This keeps the threat from overrunning the position. The process goes on until contact is broken.

This method given an even distribution of fire across the sector. It is used when no one rifle team can cover the whole sector because close terrain or limited visibility prevents it. Because teams are separated, control is more difficult than when disengaging by teams. Disengaging by thinning the lines is shown in [Figure 28](#).



**FIGURE 28. DISENGAGEMENT BY THINNING OF LINES.**

Disengagement of Rifle Teams When Employed With the BFVs.

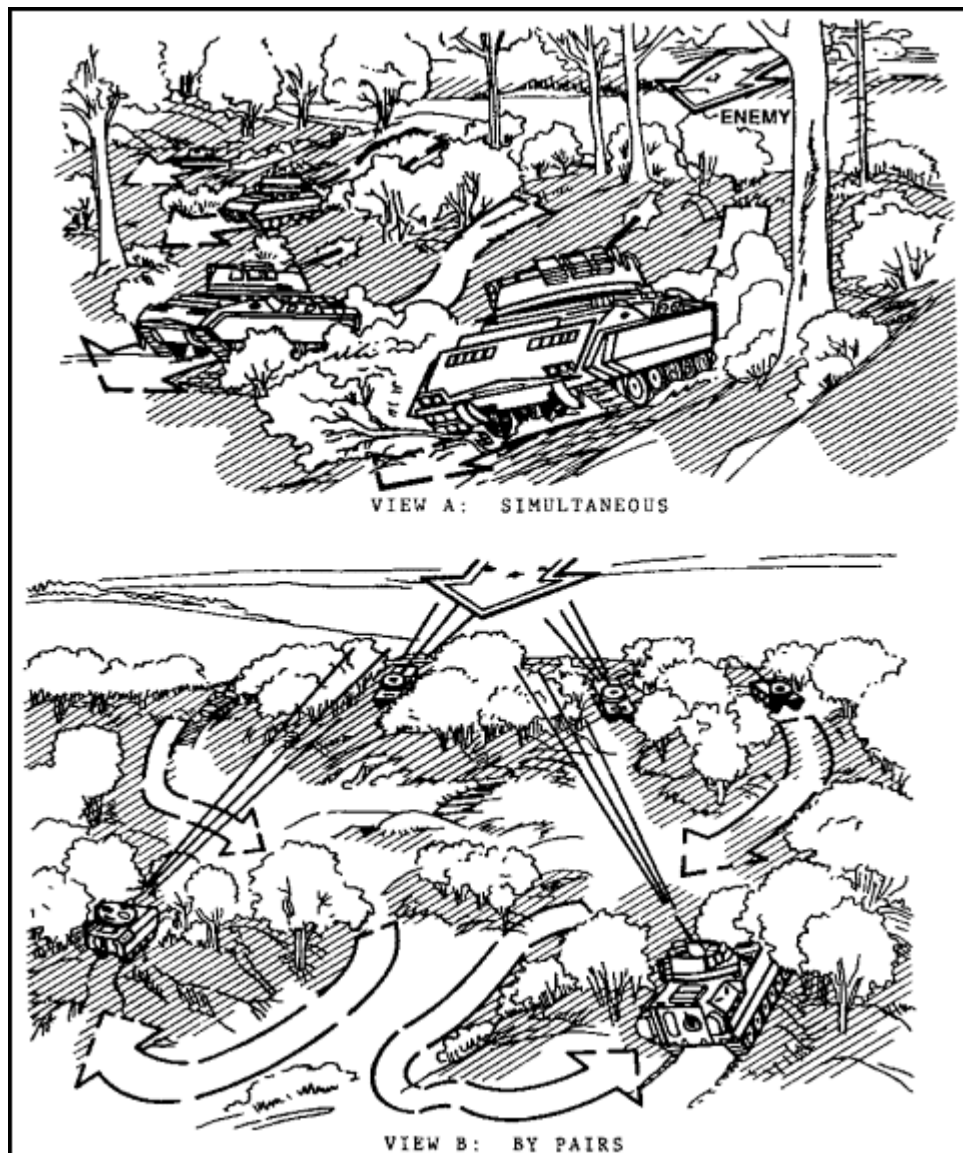
The BFVs and rifle teams may be in the same position. As a rule, the rifle teams move to the rear, while the BFVs provide a base of fire. The BFVs then quickly move to the rear. They link up with the infantry, load them, and move out. The rifle teams may use any of the techniques described above to disengage. The method chosen will be dictated by a number of things. These are the--

- Threat situation.
- Terrain.
- BFVs ability to serve as a base of fire.
- Type and amount of overwatching fires.

#### HOW THE FIGHTING VEHICLE ELEMENT DISENGAGES

Because of the BFVs speed, firepower, and protection against small-arms fires and artillery shell fragments, it is usually best for the dismounted element (when deployed) to disengage first while covered by the BFVs. But if the BFVs are not in a position to support the dismounted element by fire or the dismounted element is heavily engaged, the fighting vehicle element may have to disengage first and move to a position to assist the dismount element in disengagement. Whichever method is used, there are two basic ways the dismount element can disengage.

If the BFVs are covered by another force, simultaneous disengagement may be used. If the BFVs must cover its own movement, it disengages by pairs. These methods are similar in concept to those used by the dismounted element. They are shown in [Figure 29](#).



**FIGURE 29. DISENGAGEMENT METHODS.**

#### Simultaneous Disengagement

In this method, the BFVs move quickly as one unit. Normally, rule, this method is used when the BFVs are covered by another force, and speed is the most crucial factor. If the rifle teams are mounted, the entire platoon moves. The new position is named by the company or team commander. If the rifle teams are deployed, the BFVs move to the remount point to pick them up, or it may have to attack the threat by fire from a new position. This will allow the rifle teams to disengage. Once the rifle teams have disengaged, the BFVs again disengage.

Disengagement by Vehicle or Pairs of Vehicles. This method is used when the BFVs must cover themselves. One, two, or three BFVs are left in place to give the base of fire. The rest move to the rear. The base of fire must cover the whole sector until the other BFVs reach a position they can use to give a base of fire.

The number of BFVs left to give the base of fire varies. It depends on the enemy situation and on how quickly the BFVs must disengage. As a rule, one pair gives the base of fire, while the other moves back.

The BFVs which are getting the heaviest fire are disengaged first. Other BFVs, ITVs, or tanks must be able to cover the sectors of the disengaging BFVs. If this is not done, the threat will quickly move through the gap they leave.

In all cases, the BFVs keep up fire and movement to the rear until they have disengaged, or until they are in a position to give a base of fire for other forces. Execution must be aggressive and well controlled. The dismount force uses covered and concealed routes to move to the rear. The BFVs cover by stepping up their rate of fire. Turret weapons stay in the direction of the threat. Firing ports are manned as soon as the rifle teams remount.

The platoon leader should request indirect fire and smoke to cover the move. HE is used against threat troops, and smoke is used to screen exposed routes the platoon must cross. The BFVs smoke generator is also used. If breaking contact is hard, the smoke grenade launchers should be used.

The platoon may need direct fire support to disengage. The platoon leader should request it. The covering fire of other forces may not be enough to let the platoon move. They may then have to use both mounted and dismounted fire and movement.

During disengagement, the commander of the larger force may give the platoon directions. They may have to cover the movement of other platoons. This may be done by holding terrain, or they may occupy battle positions to fire into assigned areas.

## CONCLUSION

In this learning event, you have seen how the Bradley platoon disengages from the defense. The methods used by both the BFVs and the dismount force were covered. The disengagement is a crucial move. It must be done with speed and control. This means it must be well planned. The platoon leader must be prepared in order to do this.

## Learning Event 4: IDENTIFY TECHNIQUES USED BY THE BRADLEY PLATOON FOR PLANNING AND CONDUCTING DELAY AND WITHDRAWAL OPERATIONS FROM A DEFENSIVE POSITION

In this learning event, you will learn how the platoon conducts delays and withdrawals. The platoon does not conduct these singly. They act as part of a company or company team. Platoons and squads have the same basic tasks here as in other defensive operations. They are modified to fit the concept of the larger force.

### DELAY

A delay is fought to slow the advance of the threat. It trades space for time. If possible, it stops the threat. At times, the threat's strength, or the risk to friendly forces, will be too great. The threat is then engaged to force him to deploy.

Just as the threat seems ready to mount his assault, the delaying force disengages. They withdraw to a new position. The threat must then remount, move forward, and prepare for another assault. The delaying force may use any tactic needed. They may attack, ambush, or raid.

The platoon performs tasks given by the commander of the larger force. Most of these are standard defense missions. The platoon may--

- Emplace obstacles.
- Defend a position.
- Fire into assigned sectors or engagement areas.
- Provide security.
- Prepare in-depth battle positions.

The remount is a crucial part of the delay. BFVs must be in a position to make full use of their long-range fields of fire. They must also be able to support the rapid redeployment of the platoon to the next position.

## WITHDRAWAL

In the withdrawal, the force frees itself for a new mission. This may be with or without threat pressure. The method the company or company team commander uses to withdraw depends on enemy pressure.

### Withdrawal Under Pressure

This is done when the threat is attacking or is expected to attack. Generally, the company or company teams covers its own disengagement or withdrawal. Platoons disengage by fire and movement. They mass fires to move away from the threat.

### Withdrawal Not Under Pressure

This is used when the threat is not attacking. The commander thinks he can use stealth to withdraw before the threat can react. A detachment left in contact (DLIC) may be used to give cover. The DLIC protects the main body by deception or by resistance when needed. The make up of the DLIC is directed by the commander of the larger force. It may be made up of a squad from each platoon, or it may be one platoon from the larger force or any other combination of forward forces. The platoon or squad, as part of the DLIC, may shift to cover the sector of the withdrawing forces. This should be done only when needed. Too much movement may alert the threat. If they are spread too widely, there may be command and control problems.

The platoon may serve as the DLIC for a larger force. In this case, the company team executive officer (21C) or the platoon leader is the DLIC commander. A squad may stay in the platoon position while the rest of the platoon withdraws. That squad is part of the DLIC. It is controlled by the company executive officer or one of the platoon leaders.

The DLIC tries to deceive the threat. To do this, they feign the company or company team's function. They must be ready to detect and repel threat attacks. This allows the main body to withdraw safely. Part of the main body's ammunition and missiles may have to be left with the DLIC.

The withdrawal not under pressure is best conducted in reduced visibility. The main body rifle teams and BFVs should choose remount points ahead of time. These are to the rear of the positions they hold. Squad leaders should reconnoiter routes to the remount points. The withdrawal can then be done quickly and with little confusion. The rifle teams mount the BFVs. The platoon(s) then move quickly along a named route to their next position.

The DLIC commander will direct the DLIC to withdraw. They must disengage quickly, since they are exposed. They may move along assigned routes to assemble. Then, they move out to the next mission.

#### Learning Event 5: CONDUCT A DEFENSE BY A BFV PLATOON DURING MOUT

Urban areas usually sit astride or dominate high-speed avenues of approach through or around the urban area. If urban areas cannot be bypassed easily, they may reduce the momentum of the enemy's attack.

While defending on urban terrain, tanks and BFVs will dominate streets and other high-speed avenues of approach. This forces the enemy to dismount and use the buildings on either side. Dismounted infantry is used in buildings to cover the streets, as well as the building, floor, and room entrances. Care must be taken when positioning tanks and BFVs inside buildings because flooring may not support their weight.

Bradley commanders must take care to preclude damage to the 25-mm gun and TOW launcher when working around and inside of buildings.

In an urban area, the enemy is greatly restricted in his movement and observation. Defensive positions must be carefully selected to provide mutual support between all elements. Leaders must realize that an urban defense can be quickly defeated by allowing the enemy to infiltrate through routes not covered by observation and fire, such as sewers or over the top of buildings.

As in the attack, most of the fighting is difficult when the elements are separated. The commander may tell the platoon leader which element to locate with. The typical missions of a platoon defending in an urban area are--

- Providing direct fire support to destroy or suppress enemy positions.
- Destroying enemy armored vehicles and direct fire artillery pieces.
- Providing rapid, practiced transport to dismounted infantry, as required.
- Reinforcing selected areas with fire and by transporting dismounted infantry.
- Covering obstacles by fire.
- Providing smoke screens to cover friendly movement.
- Providing resupply of critical items.
- Evacuating casualties as the mission permits.

In the defense, the BFV should be integrated into the platoon fire plan. The 25-mm gun and 7.62-mm coax fields of fire should cover streets and open areas. Because of the close engagement ranges, the TOW launcher will not often be used. Dragons and LAWs in the hands of the dismounted infantry and the main gun of the tanks will be the primary destroyers of enemy tanks. Dismounted antitank weapons cannot be fired from unvented or completely enclosed rooms.

## CONCLUSION

This learning event covered the delay and the withdrawal. The lesson also covered other aspects of the defense. You have learned how to plan and conduct the defense in limited visibility. Air defense tactics were discussed. Methods of disengagement have also been covered here. Turn the page and complete the practice exercise before taking the examination at the end of this subcourse.

# LESSON 2

## PRACTICE EXERCISE

**Instructions** This practice exercise is to check your understanding of [lesson two](#). All questions are multiple-choice. Try to answer the questions without referring to the lesson material. When you have completed the questions, turn to the PE answer page and check your answers.

1. The platoon is in a defensive position at night. The weather forecast is for heavy fog before morning. The effectiveness of night vision devices will be degraded to counter this condition. As the platoon sergeant, you
  - ☐ A. increase the number of OPs and patrols.
  - B. instruct the BFVs to use both the image intensifier and thermal sights together.
  - C. use the AN/VVS-2 night vision viewer.
  - D. use the TOW night tracker on the OPs.
2. As the platoon leader, you have established a silent watch plan for the platoon. As you instruct the BFV gunners on silent watch, you emphasize the 10 minute overlap to allow the
  - A. thermal imagery sight to cool down for full effectiveness.
  - B. thermal imagery sight to warm up to be effective.
  - C. new watch team time to load weapons and make a radio check.
  - D. increase security measures during the change over of teams.
3. Effective fire control in the defense is vital. It starts in each fighting position. Limited visibility increases the importance of fire control in the defense. As the platoon leader, each fighting position must have
  - A. a sector, aiming stakes, and range cards.
  - B. clear fields of fire out to 240 meters.
  - C. a copy of the platoon sector sketch.
  - D. security measures to secure the flanks.
4. As the platoon sergeant, you are conducting a class on aircraft engagement with the BFV to engage a MIG 25/FOXBAT. You use
  - A. TOW weapons system.
  - B. 25-mm firing 200 to 300 rounds a minute.
  - C. 7.62-mm coax because of the rate of fire.
  - D. M249 SAW.



5. 5. You are explaining the techniques used to engage an M24 Hind D hovering helicopter. You ask one BFV gunner the correct weapons use to engage the target. He replies (Only three choices)
- A. 7.62-mm coax, using the ring sight.
  - B. TOW, using the day tracker.
  - C. 25-mm, using the ISU.
6. The dismounted element is forward of the mounted element. The forward element must break contact and move to the BFVs. The basic tactics you use as the platoon sergeant are
- A. fire and movement.
  - B. thinning the lines.
  - C. rifle teams.
  - D. squads.
7. As the platoon leader, you are with the dismounted elements. You must disengage and move to the remount point to assume another mission. Speed is crucial and the adjacent platoon will provide overwatching fires. The method of disengagement you use is (Only three choices)
- A. rifle teams.
  - B. thinning the lines.
  - C. simultaneous.
8. The rifle teams are employed with the BFVs in the same position. The rifle teams must disengage for a delay mission. As the platoon leader, the method of disengagement you select will be dictated by--
- A. the adjacent platoon movement.
  - B. the amount of overwatch fires.
  - C. the company team commander.
  - D. the rearward movement.
9. 9. Your platoon has been tasked to delay the threat. Your mission is to trade space for time. The threat is overpowering your delay. As the platoon leader, your action is
- A. to engage the threat and force him to deploy.
  - B. to conduct a simultaneous disengagement.
  - C. to allow the threat to pass and attack from the rear.
  - D. to withdraw under pressure.

10. 10. The company team is conducting a withdrawal not under pressure. Your platoon will be the DLIC, with a squad from each platoon. AS DLIC, you are

- A. to delay and withdraw.
- B. to withdraw on order of the executive officer.
- C. to deceive the threat.
- D. to conduct an attack and delay.